

DOCUMENT RESUME

ED 247 684

EC 170 034

AUTHOR Fifield, Marvin
TITLE Improving the Utilization and Educational Relevance of Individual Psycho-Educational Assessment Reports in the Placement of and IEP Development for Handicapped Native American Children., Final Report.
INSTITUTION Utah State Univ., Logan. Exceptional Child Center.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE Mar 83
GRANT G008100322
NOTE 182p.; An accompanying document to EC 170 035.
PUB TYPE Reports - Research/Technical (143)
EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *American Indians; *Disabilities; Elementary Secondary Education; *Handicap Identification; Individualized Education Programs; Inservice Teacher Education; Recordkeeping; Reports; School Psychologists; *Student Evaluation; Student Placement

ABSTRACT

The report presents findings from a study of the extent to which psychoeducational testing reports were used in one Navajo district and on the obstacles affecting their use. Data included an analysis of findings and recommendations in 321 individual psychoeducational reports, a structured critique by school personnel of 79 testing reports to evaluate their educational relevancy, usability, and accuracy; an analysis of the relationship between report and Individualized Education Program recommendations; and observational and interview data. Findings are presented on the three major study objectives: identification of strengths and weaknesses of the psychoeducational system in use; design of an inservice training program for teachers, administrators, and school psychologists; and evaluation of results in both areas. The study resulted in six recommendations, including emphasis on converging data, obtaining second opinions, and synthesizing reports to control cultural and language bias; design of a standard testing report format; and training and certification as psychologists of Navajos who possess language and cultural skills. (CL)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

Utah State University, Logan
Exceptional Child Center

**U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)**

- ✓ This document has been reproduced as received from the person or organization originating it
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy

ACKNOWLEDGEMENT

In field research of this nature, the support, input, and assistance of individuals in the service agency is a crucial factor. In this study, Dr. Charles Deal and Dr. Helen Zongolowicz were particularly active and it was their efforts that made the study possible. Dr. Deal as the Director of Special Education for the Fort Defiance Agency, Office of Education, was in every respect the co-principal investigator on this study. It was through discussions with Dr. Deal and Dr. Zongolowicz that the initial dialogue identified the need and conceptualized the project. Furthermore, not only have they been active in this project, but have initiated assistance and supported efforts to train Navajo school psychologists to make appropriate curriculum adaptations in the improvement of the IEPs through inservice training. These factors have addressed some of the more serious problems of providing services on the reservation.

Appreciation is also expressed to M. Bryce Fifield who prepared the initial grant application and participated in the inservice training and the data collection throughout the study. David Bush, Phil Latham, Bruce Johns and Dorothy Voorhees were graduate assistants to the project and assisted in various dimensions of the tests administration, data collection, editing, and training. Finally, appreciation is expressed to Sonja Nyman for the extra hours that she has devoted in typing the numerous drafts of the final report and orchestrating the typing of the individual testing reports throughout the study.

TABLE OF CONTENTS

	Page
Acknowledgement	ii
List of Tables	vi
Introduction	1
Abstract and Summary of Recommendations	5
Objectives and Methodology	10
Population and Data Collection	14
Instruments	18
STEP Objectives for Student IEPs	21
Psycho-Educational Testing Report Format	21
Psycho-Educational Testing Report Critique Form	22
Structured Interview	25
Results	26
Objective 1 - Determine Existing Strengths and Weaknesses in the Psycho-Educational Assessment Reporting System and Process for the Fort Defiance Agency	27
Placement	28
Short-Term Goals	30
Long-Term Goals	34
Instructional Strategies and Materials	36
Support Services	38
Evaluation Criteria for Success	38
Objective 2 - Based on the Assessment Data Collected in Objective 1, An Instructional Program Will Be Designed to Train: (A) Teaching and Administrative School Personnel, and (B) School Psychologists	40
Inservice Workshop I	41
Seminar I	45
Inservice Workshop II	45
Seminar II	46
Objective 3 - As a Result of the Training Conducted in Objective 2, Testing Results Will Be Found to Be More Valuable in Making Decisions Concerning the Placement of Native American Students in Special Education Programs	46
Testing Results Will Be Used More Frequently by School Personnel	47
Testing Reports Will Be Perceived by School Personnel as Being More Usable and Understandable	50

	Page
Met Their Information Needs	50
Useful in Preparing Students' Educational Programs . . .	58
Extent Testing Reports Were Accurate	63
Clarity, New Information, Accuracy, and Usefulness of the Findings on Testing Reports	68
Overall Clarity and Appropriateness of Testing Reports	72
Clarity of Testing Results	73
Extent Report was Useful in Determining Student's Placement	73
Jargon	73
Comparison With Other Testing Reports Used in the Past	74
Extent Report Addressed the Referral Question . .	74
Extent Report Considered Social and Culture Factors	74
Relationship Between Instructional Program Proposed in the IEP and the Recommendations in the Testing Reports . . .	80
Reason for Referral	82
Clarity of Referral Question	82
Recommendation for Placement	84
Relationship Between Short-Term Recommendations on Testing Reports and IEPs	85
Relationship Between Recommendations for Long-Term Instructional Goals Contained on Student Testing Reports and Their IEPs	87
Relationship Between Recommendations for Specific Materials and Strategies, Supplemental Services, and Criteria for Evaluating Effectiveness on the Testing Reports and the IEPs	89
Improvement in Referral Forms, Testing Reports, and Procedures to Communicate Test Findings	92
Discussion and Recommendations	98
Objective 1 - Strengths and Weaknesses in the Psycho- Educational Assessment Process of the Fort Defiance Agency . . .	101
Utilization of Contract Psychological Testing Services . . .	101
The Referral Process	104
Accessibility of Testing Reports and Confidentiality	104
Objective 2 - Provision For Inservice Training of School Personnel and ECC Psychologists	105
Objective 3 - Determining The Impact of Intervention and Training Provided by the Study	106

	Page
Recommendations	110
Referral Process	110
Cultural and Language Bias	112
Testing Report Format	114
Navajo Psychologist	115
Future Psycho-Educational Testing Contracts	119
Fort Defiance Instructional Program	120
Appendices	122
Appendix A. Bibliography	123
Appendix B. Procedural Phases, Tasks, and Steps of the Study . .	129
Appendix C. Example of the Psycho-Educational Testing Report Critique Form	134
Appendix D. Individual Tests Used by Psychologists and Frequencies	140
Appendix E. Psycho-Educational Test Report Format	143

ASSESSMENT RESEARCH FINAL REPORT

Tables

1. Objectives, Research Design, Timelines, and Source of Support
2. Ages and Number of Children Tested
3. Analysis of the Findings and Recommendations Contained on the ECC Psycho-Educational Reports for Students Tested at the Target Schools for the Assessment Research Project
4. The Extent School Personnel Used Psycho-Educational Testing Reports During the School Year
5. The Purpose School Personnel Refer to Psycho-Educational Testing Reports
6. The Extent School Personnel Felt Excerpts of Specific Sections of the Report Met Their Information Needs
 - 6a. The Extent School Personnel Felt the Referral Information in the Reports Met Their Information Needs
 - 6b. The Extent School Personnel Felt the Background Information in the Reports Met Their Information Needs
 - 6c. The Extent School Personnel Felt the Behavioral Observations in the Reports Met Their Information Needs
 - 6d. The Extent School Personnel Felt the Psycho-Educational Findings in the Reports Met Their Information Needs
 - 6e. The Extent School Personnel Felt the Summary Section in the Reports Met Their Information Needs
 - 6f. The Extent School Personnel Felt the Recommendations in the Reports Met Their Information Needs
 - 6g. The Extent School Personnel Felt the Diagnostic Statement in the Reports Met Their Information Needs
7. The Extent School Personnel Felt Excerpts of Specific Sections of the Reports Were Useful in Preparing Students' Educational Programs
 - 7a. The Extent School Personnel Felt the Referral Information in the Reports Was Useful in Preparing IEPs
 - 7b. The Extent School Personnel Felt the Background Information in the Reports Was Useful in Preparing IEPs
 - 7c. The Extent School Personnel Felt the Behavioral Observations in the Reports Were Useful in Preparing IEPs

- 7d. The Extent School Personnel Felt the Psycho-Educational Findings in the Reports Were Useful in Preparing IEPs
- 7e. The Extent School Personnel Felt the Summary Section in the Reports Was Useful in Preparing IEPs
- 7f. The Extent School Personnel Felt the Recommendations in the Reports Were Useful in Preparing IEPs
- 7g. The Extent School Personnel Felt the Diagnostic Statement in the Reports Was Useful in Preparing IEPs
- 8. School Personnel Evaluation of the Accuracy and Appropriateness of the Recommendations in the Psycho-Educational Reports
 - 8a. The Extent School Personnel Felt the Recommendations in the Reports Were Appropriately Specific
 - 8b. The Extent School Personnel Felt the Recommendations in the Reports Provided New Information About the Students
 - 8c. The Extent School Personnel Felt the Recommendations Were Realistic Considering the Given Resources
 - 8d. The Extent School Personnel Felt the Recommendations Were Useful in Developing the Students' Educational Programs
- 9. School Personnel Evaluation of the Accuracy and Appropriateness of the Findings in the Psycho-Educational Reports
 - 9a. The Extent School Personnel Felt They Understood What the Psychologists Were Saying in the Reports
 - 9b. The Extent School Personnel Felt Statements in the Reports Provided New Information About the Students
 - 9c. The Extent School Personnel Felt the Statements in the Reports Were Accurate
 - 9d. The Extent School Personnel Felt Statements in the Reports Were Useful in Planning the Students' Educational Programs
- 10. Evaluation by School Personnel of the Clarity and Appropriateness of the Overall Psycho-Educational Testing Reports
 - 10a. The Extent School Personnel Felt the Reports Clearly Stated the Students' Testing Results
 - 10b. The Extent School Personnel Felt the Reports Were Useful in Determining Students' Placement
 - 10c. The Extent School Personnel Found Technical Words or Phrases in the Reports Difficult to Understand

- 10d. The Extent School Personnel Felt the Reports Compared With Other Reports Seen in the Previous Year
- 10e. The Extent School Personnel Felt the Recommendations in the Reports Addressed the Referral Question
- 10f. The Extent School Personnel Felt the Psychologists Gave Appropriate Consideration to Social and Cultural Factors
11. Referral and Placement Information From the Testing Reports of Students Placed in Special Education
12. Relationship Between Short-Term Recommendations Contained on the Testing Report and the IEP
13. Relationship Between Recommendations for Long-Term Instruction Goals Contained on the Testing Report and the IEP
14. Relationship Between Recommendations for Specific Material, or Instructional Strategies, Supplemental Services, and Criteria for Evaluating Effectiveness Contained on the Testing Report and the IEP
15. Overall Rating of How Well the Testing Reports Agreed With the IEPs and the Quality of the Reports
16. Summary of Written and Verbal Comments of School Personnel Concerning Psychological Assessment

**Improving the Utilization and Educational Relevance of
Individual Psycho-Educational Assessment Reports in
the Placement Of and IEP Development For
Handicapped Native American Children**

INTRODUCTION

Each year, schools throughout the United States spend millions of dollars on diagnosis and assessment of children with suspected learning handicaps (Goslin, 1963). A significant amount of this assessment is provided by school psychologists administering individual psycho-educational tests to children who have been referred. Individual psychological assessment traditionally includes three areas: (a) data collection that includes review of referral and existing assessment information, (b) assessment--the administration of individual tests designed to measure ability, language skills, achievement, social behavior, emotional factors, psycho-motor skills, etc., and (c) communicating results through preparation and submission of psychological testing reports and/or student staffings to assist in the interpretation of testing results (Oakland & Matuszek; 1977, 1983). In practice, the above process may emphasize one or two of the listed areas and virtually ignore others (Grubb, 1981). Depending on how completely each component is addressed, the cost for each child's evaluation may range from \$50 to several hundred.

There is evidence, however, which suggests that testing results, especially in the form of individual psycho-educational testing reports, are not particularly useful to teachers and other school personnel (Fifield, 1980). In many cases, individual psycho-educational reports are used only to meet the legal requirements for placement of children in special education programs. If individual psycho-educational reports are not used to diagnose

problems and providing meaningful recommendations for remediation, the process of individual assessment becomes an irrelevant and extremely expensive exercise in both time and resources. Even though the utility of individually administered psycho-educational testing is a crucial issue, there is a paucity of literature which describes or documents efforts to systematically improve the relevance and usability of individual psycho-educational testing results.

This project investigated the extent to which testing reports were used by school personnel in the Fort Defiance Agency on the Navajo Reservation, and identified the problems and obstacles which affect the value and the use of such testing reports. Based on information collected in the first phase, the psycho-educational evaluation and reporting process were modified in an attempt to improve the utility and relevance of the assessment process in the placement of children in special education and developing individual educational plans. As the second objective, the project developed and implemented an inservice training program for school personnel and school psychologists to increase their understanding of individual tests and practice the skills necessary in using psycho-educational testing reports for placement and program development. The report describes the activities of the project and summarizes the evaluation data indicating the impact of the various interventions.

Funding for the Study

Support for the various components and activities which constituted this study was obtained from three sources:

1. A contract to the Exceptional Child Center from the Fort Defiance Agency of the Navajo Area Bureau of Indian Affairs Office to provide individual

psycho-educational evaluations to Fort Defiance students referred during the 1980, 1981 and 1982 school years.

2. A contract to the Exceptional Child Center from the Fort Defiance Agency to provide inservice training addressing issues concerning psycho-educational testing, placement, referral, and programming decisions for special education children for 1981 and 1982.
3. A grant from the U.S. Department of Education, Office of Special Education, authorized under CFDA 84.023E Assessment Research. Funds from the Office of Special Education (OSE) were provided in response to a proposal submitted January 9, 1981 and approved to commence September 3, 1981, Grant #G0081-00322. The OSE grant provided: (a) the staff to conduct the evaluation of the testing procedures and reports, including the design of the critique and evaluation instruments, inservice training, and data collection, (b) computer time for analysis of data, and (c) preparation of reports.

This final report is divided into the following sections: (1) Abstract and Summary of Recommendations, (2) Introduction, (3) Objectives and Methodology, (4) Results, and (5) Discussion and Recommendations.

In Section 5, "Discussion and Recommendations", the results are interpreted, discussed, and recommendations to the Fort Defiance Agency and BIA Special Education Program are provided. This final section combines the quantitative data collected during the study with the perceptions of the project staff and the principals, special education staff, and special service staff of the Fort Defiance Agency. These data were collected primarily by Dr. Charles Deal who throughout most of this study served as the Director of Special Education of the Fort Defiance Agency, and Mr. Norman Wilcox who served the last few months in this capacity.

Accompanying this report is the "Inservice Training Resource Manual" which contains the inservice training manuals used for the workshops provided Fort Defiance school personnel August 11-14, 1981 and August 11-12, 1982, together with the workshop evaluation reports. In addition, two inservice workshops were conducted for the school psychologists who administered the individual psychological assessment to children referred during the years 1981 and 1982. These workshops were provided August 27, 1981 and August 28, 1982. The agendas for these workshops, workshop materials, work activities, and exercises for participants together with a workshop evaluation report are also contained in the Resource Manual.

ABSTRACT AND SUMMARY OF RECOMMENDATIONS

Abstract

It was the purpose of this project to: (a) determine the strengths and weaknesses of the psycho-educational assessment process followed in the Fort Defiance Agency on the Navajo Reservation and to initiate appropriate changes for improvement, (b) develop and provide inservice training for teachers and administrative staff at the Fort Defiance Agency and to school psychologists who provide psychological services, and (c) evaluate the impact of: (1) the changes made in the individual psycho-educational testing, and (2) the inservice training provided to school personnel and psychologists.

The research design utilized time series measures of assessment and intervention. Data was collected from three in-tack schools in the Fort Defiance Agency during 1980 through 1982. The data included: (a) an analysis of the findings and recommendations contained in 321 individual psycho-educational reports, (b) a structured critique by school personnel of 79 testing reports to evaluate their educational relevancy, usability, and accuracy, (c) an analysis of the relationship between the recommendations in psycho-educational testing reports and recommendations on the students' IEPs, and (d) observational and interview data collected systematically during the project.

The findings suggest that the utilization and educational relevance of psycho-educational testing reports can be significantly improved by:

1. Increasing the familiarity of psychologists with the instructional materials, service and placement programs, and teaching philosophies of the school district, the building, and the individual teachers for whom testing reports are being prepared.

2. Increasing the interaction and dialogue between the psychologist and appropriate school personnel before testing and particularly in staffing after testing.
3. Adapting the format of individual psycho-educational testing reports to ensure that they include essential data points necessary for placement and programming decisions, provide a synthesis of available student assessment information, highlight important data, eliminate jargon, and focus on instructional recommendations.
4. Improving and expanding the descriptive information contained from the student referral process.
5. Evaluating and providing feedback to the psychologists from school personnel concerning the usefulness and relevance of their assessment services in making placement and programming decisions.

From the data collected and analyzed and the experience in conducting this study, the following recommendations are presented and discussed:

1. That the process by which students are referred for assessment services be reexamined and evaluated.
2. That a "standard" testing report format be designed and utilized based on the information needs of test result users and the provisions of Public Law 94-142.
3. That culture and language bias be controlled procedurally.
4. That Navajos be trained and certified as school psychologists.
5. That future psycho-educational testing contracts increase the specificity and the description of the services to be provided and that test result users participate in the selection of the contractor.
6. That the instructional program in basic mathematics and reading for the Fort Defiance Agency be reexamined.

Summary of Recommendations

The recommendations and findings derived from this study, including the data collected and analyzed; the experiences of providing the psychological services, designing and conducting the inservice training, and evaluating the relevance of the testing reports; along with the inservice training, are particularly applicable to the Fort Defiance Agency. However, the findings also have direct application to many other BIA boarding schools where conditions and responsibilities are very similar. In addition, it is felt that the recommendations and findings will have meaning and application in regular public education and school districts in general. The following section presents a summary of the recommendations, further discussion of these recommendations is contained in Chapter 5, pages 111 through 123.

1. It is recommended that the student referral process and forms by which students are referred for psychological testing be examined and reevaluated. The referral process should serve both as a summation of past concerns and as an entry point into the psycho-educational assessment process. Referral information must contain certain provisions whereby the referral question (need or reason for the referral) can be clearly identified, thus enabling the diagnostician providing individual assessment to respond to the information needs of the referrer. If individual assessment is to provide more than general orientation type data, it must serve the information needs of the referrer. When such needs and concerns are not clearly presented, diagnosticians tend to use screening and broad purpose instruments which often duplicate what has previously been done and do not provide the desired degree of specificity which makes information they contain relevant and usable for the referrer.

2. To control culture and language bias in psychological assessment, it is recommended that convergent data procedures (confirmation data and obtaining second opinions) and synthesizing all relevant data in a report should be followed. Existing individual assessment instruments do not adequately control for culture bias and available alternatives to standardized tests have not proven to be effective. At this time, the most effective control for instrument and professional bias appears to be procedural safeguards emphasizing a variety of different instruments designed to obtain needed specific information with results validated against other data to test out causative and treatment hypothesis.
3. It is recommended that a "standard" testing report format be designed and utilized based on the information needs of test result users and the provisions of Public Law 94-142. The "standard" testing report format should contain the essential data upon which placement and program decisions can be based. The report format should require the examiner to either address each essential information point or provide an explanation as to why such information was not considered relevant.
4. There is an urgent need for trained and certified Navajo psychologists fluent in Navajo and familiar with the culture to provide needed psychological services on the reservation. Until competent Navajo psychologists are available, the following recommendations are made:
 - a. Anglo school psychologists, in training, should be given greater opportunities to work with Navajo and Native American children under appropriate supervision. The current practice of contracting for psychological assessment services with only licensed psychologists, irregardless of their prior experience and familiarity with the Navajo way of life and the service delivery systems on the

reservation, prevents Anglo psychologists from obtaining the experience they need to better serve Navajo children.

b. When Navajo interpreters are utilized, they must be carefully trained and familiar with the concepts of standardized instructions and responses.

5. Future psycho-educational testing contracts awarded to individuals or agencies should specify the following: (a) a standard psychological testing report format consistent with Recommendation 3, (b) staffing and systematic interaction both before and after the testing is completed between tester and school personnel, (c) orientation and training for the psychologists who are awarded contracts to acquaint them with the service options, materials, and techniques available to serve children, (d) input from the test report users in the selection of individuals or groups to provide assessment services, and (e) a systematic evaluation of each dimension of the testing process.

6. It is recommended that the instructional program at the Fort Defiance Agency be reexamined to determine if sufficient emphasis is being placed on instruction, drill and practice to ensure that each child achieves an acceptable degree of mastery in the basic skills of reading and math. In analyzing the performance of 598 children from the Fort Defiance Agency who received individual assessment during the conduct of this study, virtually every child, rather eligible or not for special education services, was found to be significantly delayed in the primary skills of word attack and mathematics. Furthermore, many dedicated and concerned teachers and administrators expressed the concern that basic reading and mathematic skills were not receiving the emphasis they needed.

OBJECTIVES AND METHODOLOGY

It was the purpose of this project to improve the utilization and educational relevance of individual psycho-educational assessment reports in making decisions concerning placement and in developing Individual Education Programs (IEPs) for Native American children. More specifically, the project was designed to:

- 1/. Determine the strengths and weaknesses in the psycho-educational assessment process followed in the Fort Defiance Agency and to initiate appropriate changes to improve it.
2. Develop and provide inservice training to the teaching and administrative staff of the Fort Defiance Agency and to school psychologists who provide psychological services to the Fort Defiance Agency to expand their knowledge and skills in the utilization of individual psycho-educational assessment data.
3. Evaluate the impact of: (a) the changes made in the individual psycho-educational testing procedures and processes, and (b) the inservice training provided to school personnel and psychologists.

To accomplish these objectives, an assessment, intervention, post-assessment, time series research design was utilized (Campbell & Stanley, 1963):

O₁ X₁ O₂ X₂ O₃)

O = Observation (Use and perceived relevance of reports)

X = Intervention (Inservice training)

Data collection and intervention procedures were carried out with three intact schools (Chuska, Tohatchi, and Greasewood Boarding Schools). Data were collected to evaluate the psycho-educational testing reports that were provided for these three schools during the years 1980 through 1982.

In 1980, following the administration of individual psycho-educational testing, teachers from participating schools critiqued the testing reports, utilizing a specially designed questionnaire and structured interview. In addition, the relationship between the findings and recommendations contained in student testing reports and student individual IEPs was determined (O₁). Similar data were collected following the 1981 and 1982 individual testing (O₂, O₃).

During the fall of 1981, inservice training was provided to school personnel of the Fort Defiance Agency (X₁). The content of the inservice training was selected to address changes in skills and information needed by school personnel to use testing reports more effectively. This need was identified from the evaluation data collected from the critique of the testing process and reports provided by teachers in the 1980 testing.

Following the inservice training, changes were made in the individual psycho-educational evaluation procedures and test report format, and in the fall of 1981, testing was again provided to children referred by the participating schools. To improve the utilization and relevance of the testing reports, they were evaluated by school personnel of the participating schools in the spring of 1982 (O₂).

The Fort Defiance Agency requested that 1982 testing be provided in the spring to the Chuska School and in the fall to the Tohatchi and Greasewood Schools. Prior to the commencement of school in the fall of 1982, another inservice training workshop was provided to the Fort Defiance school personnel (X₂). The content of this workshop was again based on data collected in the spring of 1982 which identified weaknesses and changes needed to improve the use of psychological testing.

Following testing in the fall of 1982, data to determine the utilization and relevance of the testing were collected and evaluated by school personnel (O₃). These data, together with that collected in February, 1982 and spring of 1981, were used to determine the impact of the study.

This study was organized into three broad tasks: collection of data, inservice training and intervention, and determining impact. Each of these tasks contain three or more research steps. Table 1 provides a diagram of the objectives, tasks, research steps, timelines, and source of support.

Baseline data was collected from the individual psycho-educational tests administered by the ECC to Fort Defiance children in the fall of 1980. The inservice training in 1981 was provided under a separate contract with the Fort Defiance Agency. However, the content of the training was based upon the analysis of the data collected during the spring of 1981. These steps were pre-project activities (O₁, X₁).

The Assessment Research Grant began on September 3, 1981. Following the administration of the fall 1981 psycho-educational tests by the ECC in September and October, data evaluating these reports were collected and analyzed in the spring of 1982 (Step 1.1.2, 1.2.2) (O₂).

The 1982 psycho-educational testing of students was divided into two settings. Students referred from Chuska were tested in the spring of 1982 before the closing of school. Students referred from Tohatchi and Greasewood were tested in the fall of 1982 shortly after school commenced.

The second set of inservice training workshops and seminars were provided for school personnel on August 11-12, 1982 for the Fort Defiance Agency and the seminar for school psychologists August 28, 1982 (Step 2.2.1, 2.2.2, 2.2.3) (X₂). Evaluation data for the 1982 testing were collected in

Table 1

Assessment Research
Objectives, Research Design, Timelines, and Source of Support

Objectives	Project Tasks	Research Steps	Timelines	Source of Support
	<u>Pre-Project Activities</u>			
1. Determine Strengths and Weaknesses in Student Assessment of the Fort Defiance Agency	1.1 Collect Data (O_1)	1.1.1 Administration of Individual Psycho-Educational Testing to Children Referred	1980 Sep - Oct	Fort Defiance Contract
		1.2.1 Evaluation of the 1980 Psycho-Educational Testing Reports	1981 Jan - Feb	ECC Support
		2.1.1 Inservice Workshop 1, Fort Defiance School Personnel, "Student Assessment"	August	Fort Defiance Contract
		2.1.1.1 Evaluation of the Workshop	September	
		2.1.2 Inservice Seminar 1, School Psychologists	August	ECC Support
		2.1.3 Modification of Individual Testing Process and Report Format		ECC Support
		1.1.2 Administration of Individual Psycho-Educational Testing to Children Referred	Sep - Oct	Fort Defiance Contract
2. Develop and Provide Inservice Training to Staff and Psychologists and Modify Testing Procedures	1.2 Collect Data (O_2)	1.2.2 Evaluation of the 1981 Psycho-Educational Testing Reports	1982 Jan - Feb	Assessment Research
		2.2.1 Inservice Workshop 2, Fort Defiance School Personnel, "Student Assessment"	August	Fort Defiance Contract
		2.2.1.1 Evaluation of the Workshop		
		2.2.2 Inservice Seminar 2, School Psychologists		Fort Defiance Contract
		2.2.3 Modification of Individual Testing Procedures and Report Format		Assessment Research
		1.1.3 Administration of Individual Psycho-Educational Testing to Children Referred	Sep - Oct	Fort Defiance Contract
		3.1.1 Evaluation of the 1982 Psycho-Educational Testing Reports	November	Assessment Research
3. Evaluate the Impact of Changes in Test Procedures and Format and Inservice Training	3.2 Analyze Data	3.2.1 Data Analysis to Determine Impact	December	Assessment Research
		3.2.2 Preparation of Final Report	1983 March	Assessment Research

November of 1982 (Step 3.1.1) (O₃). The procedural phases, tasks, and steps for the project are presented in greater detail in Appendix B.

Population and Data Collection

The population used in this study consisted of three groups of people associated with the Fort Defiance Agency: students, teachers, and school psychologists. The Fort Defiance Agency on the Navajo Reservation was selected for this study for the following reasons:

1. The Navajo Reservation is the largest Indian reservation in the United States. Although it may appear to be somewhat atypical of other reservations and Indian populations because of its size and remoteness, many of the same problems that exist on the Navajo Reservation exist on other reservations and with other tribes. Furthermore, the educational services provided, difficulty in training staff, and environmental factors on the Navajo Reservation are similar to other BIA schools across the continental United States and Alaska. Havighurst (1981) reports that approximately 18% of the Indian children are being educated in BIA schools. In addition, 38% are attending public schools contiguous to reservations in which from 50 to 90% of the enrollment is Native American. Staffing and organizational arrangements for these boarding schools are very similar to those for BIA schools.
2. The Fort Defiance Agency School Office has, over the past three years, developed a working relationship with the Exceptional Child Center. Previous psychological testing contracts from the Fort Defiance Agency to the Exceptional Child Center provided an opportunity to acquaint the ECC staff with the organization, philosophy, and resources of the Fort Defiance Agency. This insured the needed familiarity with the agency and

cooperation and acceptance of psychological services from the Exceptional Child Center.

Within the Fort Defiance Agency, three schools (Chuska, Tohatchi, and Greasewood Boarding Schools) were identified to participate in the project. These schools were selected as being representative of the geographic and social economic conditions that exist on the Navajo Reservation. They are typical of boarding schools in the Fort Defiance Agency and indeed of other boarding schools serving Native Americans.

Participating Student Population

The participating student population included students referred for psychological assessment from the Fort Defiance Agency and tested during 1980, 1981, and 1982. Table 2 lists the number of children referred and tested from the target schools and those from the other schools in the Fort Defiance Agency.

The participating student population included those students attending the three target schools in which data were collected and intervention techniques and procedures initiated.

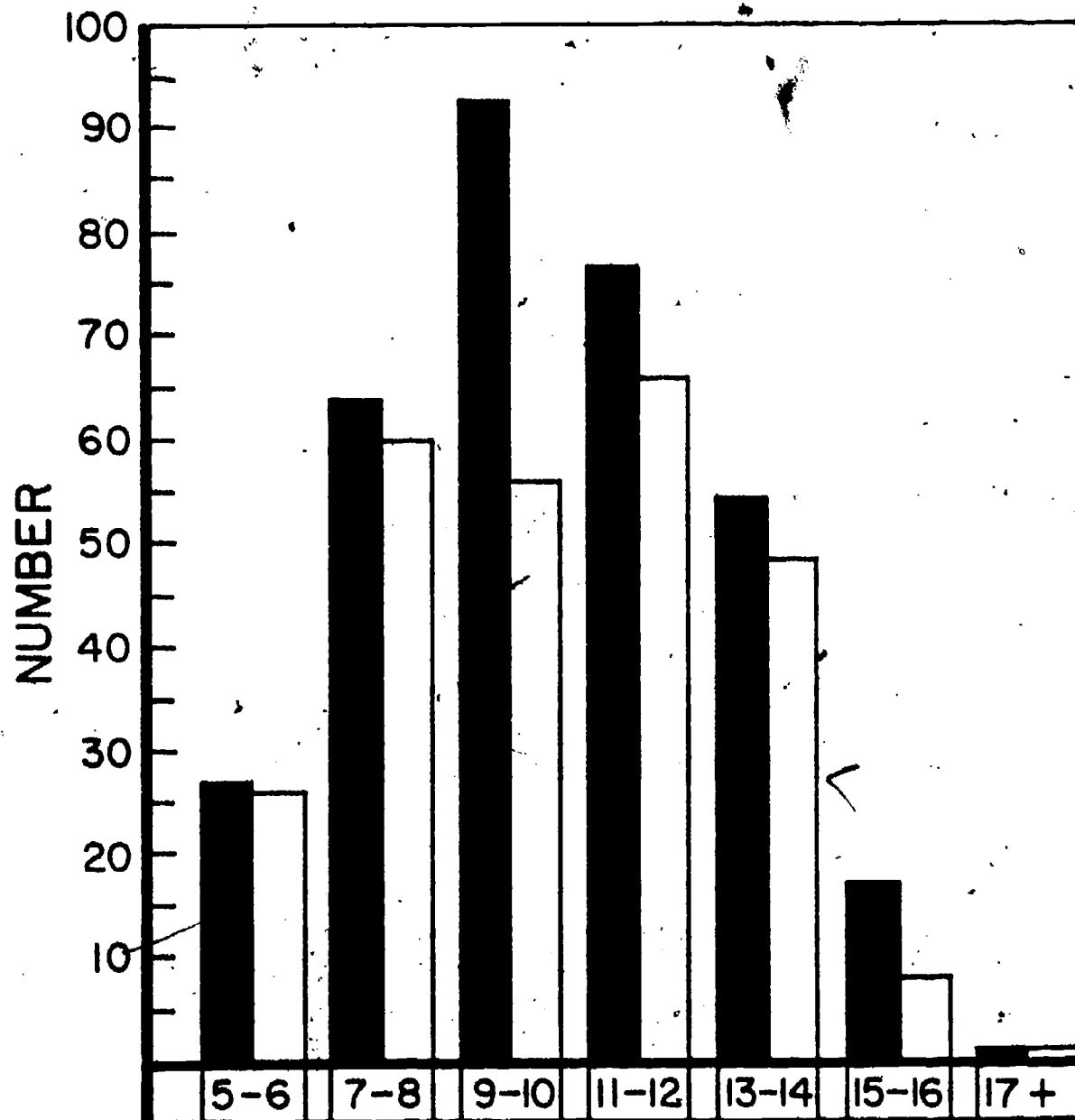
Data Collected From the Student Population

The content of the psycho-educational testing reports for each student referred and tested in the target schools in the Fort Defiance Agency was analyzed and the results summarized and tabulated. This information is presented in Table 3, page 29. From the target group student population, data was also collected to determine the relationship between recommendations and findings contained in the testing reports and those contained on the students' IEPs. A sample of psychological testing reports were abstracted from this group. These reports were then critiqued by school personnel familiar with students

FIGURE 2

AGES AND NUMBER OF CHILDREN TESTED

1980-1982



KEY:



TARGET SCHOOLS



OTHER SCHOOLS

AGES

333 CHILDREN TESTED

265 CHILDREN TESTED

98 TESTED

for which the reports were prepared. It was this data that provided information on the relevance of the psychological testing report and its usefulness and the improvement that occurred through the inservice training and the changing of the testing format as evidence of the impact of intervention throughout the study (see Appendix C, Report Critique Forms).

School Personnel

The administrative, supervisory, and instructional staff at Chuska, Tohatchi, and Greasewood Boarding Schools served as the school personnel population for this study. A sample of school personnel from the target schools was selected to critique the psycho-educational assessment process and provide evaluation data on the content and format of the individual psychological testing reports. This sample of reviewers included regular teachers, special education teachers, administrators, supervisors, and counselors. The reviewers consisted of approximately 40% of the certified personnel of the target schools and approximately 5% of all certified personnel at the Fort Defiance Agency. To maintain confidentiality and to insure that the school personnel who reviewed the reports were familiar with the child whose report they were asked to critique, the following procedures were utilized:

1. A sample of testing reports from the target schools was identified by random selection.
2. From the testing reports selected, the school personnel who participated in the referral process, IEP development, and/or who had other responsibilities for the child were identified as the test report reviewers. Of those identified, approximately 75% in each school were regular teachers. This number of regular teachers

participating in the study changed slightly from year to year due to teacher turnover and as a result of the referrals they made for testing. The counselors, supervisors, and special educators were virtually the same through the study.

Data Collected From Reviewers

Most of the evaluation data for this project were provided by the sample of school personnel who reviewed the psychological reports. The reviewers utilized the Psycho-Educational Testing Critique Form to critique the individual testing reports, participated in the inservice training, and were interviewed individually at the beginning, at midpoint, and at the conclusion of the project.

School Psychologists

The school psychologists who participated in the study consisted of 19 advanced graduate students and faculty members from Utah State University. Each psychologist selected to participate in this study had completed appropriate graduate course work and practicum experience prior to the study. Furthermore, each psychologist was personally recommended by faculty members and practicum and internship supervisors as being skilled in administering, interpreting, and reporting individual psycho-educational tests. In addition, each graduate student was supervised by faculty members and his or her team leader.

Instruments

The instruments utilized in this study consisted of commonly used individually administered standardized tests, instructional objectives contained in the STEP manual (see page 14), a summary data sheet, a

psycho-educational report critique form, and a structured interview, each designed specifically for the study.

Individually Administered Standardized Tests

The standardized tests selected to provide psycho-educational assessment of children referred included several widely utilized and accepted testing instruments. These tests were selected to provide measures in the following areas: ability, language skills, achievement, social behavior, emotional factors, psycho-motor skills, and adaptive behavior.

Appendix D provides a list of the tests and the frequency of their use for the children referred from the target schools and other schools in the Fort Defiance Agency. A one-page descriptor of each of these tests is contained in the inservice training manual for school psychologists, pages 117 through 121. In addition, a single-sentence or short-paragraph descriptor of each test was included in the individual testing report, page 317.

Utilizing individually administered psycho-educational tests consists of more than simple test selection. It is a process of: (a) understanding the reason for the referral, (b) obtaining existing information, (c) matching the need for new information with appropriate assessment instruments and other techniques, (d) administering assessment instruments, (e) comparing findings and results with concurrent data, (f) verifying conclusions, (g) synthesizing information from different sources, and (h) communicating conclusions and recommendations.

This study utilized an adaptation of the "dispositional assessment" model as outlined by Cole and Magnussen (1966). The following

factors were considered in determining assessment procedures and selecting instruments:

1. Where necessary and to the greatest extent possible, psychologists utilized standardized tests purported to be unbiased, culture fair and non-language dependent.
2. Where possible, criterion-reference tests were utilized to identify specific skills, strengths and weaknesses.
3. Where possible, adaptative behavior measures were utilized, teacher rating scales were used for all children referred, and responses to special behavior rating scales were obtained from counselors and dormitory supervisors.
4. Tests were selected and assessment procedures utilized to focus on the referral question.
5. No test was administered unless its results would contribute to an appropriate decision or action.
6. The assessment process always involved more than one person. All protocols and testing information were presented to an outside certified school psychologist for a second opinion.
7. All assessment findings were synthesized into a report prepared with non-jargonistic language, presented in a manner that the child's parents could read and understand the report.

Additional information on the procedures of testing, training of school psychologists and evaluation information on the individual testing contract is available in "Psycho-Educational Assessment of Native American Students: A Manual of Inservice Training Activities and Resource Material for School Personnel and School Psychologists", 1983. This document is a companion to this report.

STEP Objectives for Student IEPs

In 1979, the Fort Defiance agency adopted the Sequential Tasks for Educational Planning (the STEP Program) as the basis for developing student IEPs (Greenberger, 1977). The program provides a single page listing of functional diagnosis and a task analyzed sequence of measurable objectives and was developed and published by the Kajan Valley Union School District. For this study, the STEP Program was utilized in the following manner: once a student had been determined eligible for placement in special education by the psychologists, the IEP Committee met to consider the findings and recommendations in the testing report and review other records. These records included the student cumulative folder, health records, attendance record, and social and academic records. When necessary, dorm supervisors, aides and other school staff were invited to the IEP meeting. In all instances, efforts were made to include the parent or guardian of the child. The IEP Committee reviewed alternative placements for the child, and in cases where they felt special education placement was warranted, such a recommendation was made. At this point, committee members selected the specific task number and activities from the sequential objectives that they felt met the child's instructional, social, and behavioral needs. These objectives were listed on the student's IEP as short-term and, in some instances, long-term goals, and the corresponding number of the task recorded.

Psycho-Educational Testing Report Format

Psychologists use a variety of methods to communicate findings and recommendations of individual tests to school personnel. The most common techniques are direct consultation, either individually or in

groups (staffings), or through psychological testing reports. Although much has been written about the need to improve methods of communicating testing results, there are no accepted guidelines (Sattler, 1982).

When a school district contracts with an "outside" individual or agency for psychological testing services, the opportunity for the psychologist to communicate test findings through consultation with school personnel is limited. Thus, testing results must be communicated primarily through the use of psychological testing reports.

One problem in conducting research using psychological testing reports is that test report formats vary tremendously. Some test reports consist of only the original test protocol upon which the psychologist has written brief notes, while others contain several sections, each addressing specific information needs and synthesizing information from various sources.

The contract awarded to the ECC to provide psychological testing to the Fort Defiance Agency specified a detailed synthesized psychological report that addressed the areas of information required by Public Law 94-142. The format of the testing report was submitted to and approved by the Fort Defiance Agency and the U.S. Department of Education (see Appendix E).

Psycho-Educational Testing Report Critique Form

To collect data from school personnel to determine the usefulness and relevance of the testing reports, a Psycho-Educational Testing Report Critique Form was designed. The Psycho-Educational Testing Report Critique Form was initially developed and field tested in a previous study published in 1982 (Fiffield, 1982). This form was revised and adapted for utilization in this study.

The Report Critique Form consisted of four parts: the first two parts collected general information about the content of the psychological reports, and the third and fourth parts requested respondents to rate verbatim quotations from reports selected as a sample of testing reports prepared for, and provided to the target schools (see Appendix C for a sample of the Psycho-Educational Testing Report Critique Form). The questions in Parts I and II of the report form were the same for all students in the sample and focused on the clarity and technical accuracy of the reports. The questions in Parts III and IV were designed to determine if the information was communicated clearly, if it was correct, and if the conclusions were useful in planning the student's educational program. To collect this information, a sample of reports from each phase of the study was selected and analyzed. The conclusions and recommendations made by the psychologist were taken verbatim from the report and placed on the Report Critique Form adjacent to the rating scale.

Part I - Adequacy of Information. Part I of the Report Critique Form asked reviewers to evaluate the six dimensions of the testing report: (a) the extent to which the report clearly stated the student's testing results, (b) the extent the report was felt to be useful in determining the student's placement, (c) the extent to which the reviewers found technical words and phrases difficult to understand, (d) the overall quality of the report compared with reports the reviewers had seen in the previous year, (e) the extent that the recommendations of the report addressed the referral question, and (f) the extent the reviewers felt the psychologists

gave appropriate consideration to social and cultural factors essential to the evaluation of Native American children.

Part II - Usefulness. Part II of the Report Critique Form requested the reviewers to evaluate the seven sections of the psycho-educational report: (a) Referral Information, (b) Background Information, (c) Behavioral Information, (d) Psycho-Educational Findings, (e) Diagnostic Statement, (f) Summary, and (g) Recommendations (see Appendix C). School personnel reviewing these reports were asked to rate the extent that each section addressed the information requested in the report and to rate how useful the information was in that section in preparing students' individual educational program.

Part III - Usefulness and Relevance of the Conclusion. The usefulness and relevance of psychological testing reports are determined primarily by the content of the conclusions and recommendations sections. Part III of the Report Critique Form requested reviewers to rate verbatim conclusions which the psychologist made about a particular student. This procedure made it possible for reviewers to rate each conclusion individually without having to refer to the total report.

Part IV - Usefulness and Relevance of the Recommendations. The questions in Part IV of the Report Critique Form were designed to determine: (a) the extent that the recommendations from the psychologists were at the proper level of specificity to be useful to school personnel, (b) the extent school personnel felt statements in the report provided new information, confirmation of teachers' judgements, or no new information, (c) how realistic the

recommendations were, given the conditions and resources available on the reservation, and (d) how useful the recommendations were to school personnel in developing the students' individual educational plan.

Structured Interview

A structured interview was conducted with each reviewer focusing on various sections of the Report Critique Form. The interview provided a validity check of the Report Critique Form and an opportunity to collect informal comments about the process of individual testing and the content of the reports. These data were used to develop the inservice training workshops and seminars, to clarify, follow-up on and gather new information about questions raised in written questionnaires.

RESULTS

This section focuses on the three major objectives of the study as listed in the initial grant application to the U.S. Department of Education.

1. Determine existing strengths and weaknesses in the psycho-educational assessment reporting system and process for the Fort Defiance Agency.
2. Based on data collected in Objective 1, design and present an inservice training program for teachers and administrative school personnel of the Fort Defiance Agency and school psychologists.
3. Evaluate the impact of: (a) changes made in the individual psycho-educational evaluation process, (b) the test report format, and (c) inservice training provided to school personnel and psychologists.

To further address Objective 1, a series of questions were formulated and instruments and techniques were designed to collect needed data. To address Objective 2, inservice workshops were designed and provided for school personnel of the Fort Defiance Agency and ECC psychologists. Two separate workshops were conducted for each group, the first in the summer of 1981 and the second in the summer of 1982. The content of these workshops, handout materials, etc., are contained in the Resource Manual. To further address Objective 3 (Determining the Impact of the Inservice Training and Changes in the Psycho-Educational Testing Process and Testing Report), the evaluation data and information collected as baseline data was again collected early in 1982 and at the conclusion of the project in November 1982. Comparisons were made to determine change that occurred, the direction of such change, and its significance.

9

Objective 1 - Determine Existing Strengths and Weaknesses in the Psycho-Educational Assessment Reporting System and Process for the Fort Defiance Agency

Information identifying strengths and weaknesses of the 1980 testing process was obtained by utilizing three techniques:

1. Analyzing the findings and recommendations contained in the testing reports submitted for the target schools.
2. Presenting a sample of psychological testing reports to school personnel in the target schools and having them systematically critique the report to identify the information that was relevant and useful and to what extent.
3. Interviewing school personnel to obtain their opinions and feelings concerning the value of psychological testing and how it could be improved.

The first task in determining the strengths and weaknesses of the existing psycho-educational assessment process necessitated establishing a common testing procedure and standard test report format to be used throughout the course of the study (see Appendix E, Psycho-Educational Testing Report Format). To obtain a standard testing report format, the requirements of Public Law 94-142 and the BIA guidelines for psychological services were analyzed. The format agreed upon was designed to comply with the information required in these two documents. The psycho-educational testing procedures followed during the course of this study are contained in the Resource Manual, pages 283 through 286.

During the spring of 1981, the contents of the 1980 psychological reports submitted to Chuska, Tohatchi, and Greasewood were analyzed. To analyze these data, a summary sheet was prepared which permitted analysis of

the information contained in the findings and recommendations sections in addition to a frequency count of these findings and recommendations.

Areas showing weaknesses were given particular attention in the inservice training, and/or adjustments were made to the testing report process or format for the next phase of the project. The data collected for the 1981 and 1982 testing were analyzed in the same manner as the 1980 data.

Summary data of the findings and recommendations for the target schools are presented in Table 3, pages 29 through 39. The categories in which findings and recommendations were grouped include: (1) placement, (2) short-term goals, (3) long-term goals, (4) instructional strategies and materials, (5) support services, and (6) evaluation criteria for success.

1. Placement

The data presented in Table 3 indicate that approximately half of the students tested were found eligible for special education services under the classification of "learning disability." Over the three years of the project, the percentage of students classified as learning disabled remained fairly consistent.

Approximately one-quarter of the students tested were found to be not eligible for placement in special education, 20% in 1980, 27% in 1981, and 29% in 1982. The number of students found not eligible for special education increased, but this increase was found not significant.

The number of children the psychologists found eligible for special education services in the trainable mentally retarded category reduced over the three years of the project; 19% were diagnosed as mentally retarded in 1980, 13% in 1981, and 9% in 1982. This change however was not statistically significant. The number of students found eligible

Table 3

Analysis of the Findings and Recommendations Contained on the
ECC Psycho-Educational Reports for Students Tested at the
Target Schools for the Assessment Research Project

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
1. Placement												
a. Special Education Placement Eligibility (Diagnostic Category)												
Classified as Learning Disabled	54	62	32	52	60	62	38	59	80	31	50	51
Classified as Educably/Trainably Mentally Retarded	24	21	3	19	17	10	10	13	10	8	8	9
Classified as Emotionally Disturbed	1	2	10	3	0	0	0	0	0	0	0	0
Classified as Not Eligible for Special Education Placement	15	13	42	20	22	27	38	27	10	42	29	29
No Classification/No Specifics--Additional Information Requested	5	0	6	5	0	0	10	1	5	15	13	11
Other (Visually Impaired, Gifted, etc.)	0	0	6	1	0	0	0	0	0	4	0	1
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100
b. Other Placement Considerations and Recommendations												
Recommend Placement in Special Education (Resource Room) for a Percentage of the Day	65	69	55	64	30	52	25	43	35	46	29	37
Placement in a Self-Contained Classroom (All Day)	0	10	3	3	17	8	0	10	25	8	4	11
Recommendation that the Student Remain in the Regular Classroom	13	0	0	8	0	0	0	0	0	30	17	17
Recommend Small Group Instruction	47	5	3	30	9	33	38	27	30	35	29	31
Recommend Individual Instruction with Tutorial Aides or Peers	5	8	0	5	13	10	38	14	15	85	25	44
Placement in Title I Program	12	8	0	9	0	0	0	0	0	15	38	19
Recommendation for Vocational Related Programs	5	0	0	3	0	0	0	0	5	8	4	6
No Placement Recommendation/The Decision Was Not Definite	0	0	16	3	0	6	13	5	15	8	0	7
TOTAL	148	100	77	124	70	110	113	99	175	227	146	187

for special education under the classification of emotionally disturbed, vision or hearing impaired, or other handicapping categories appeared to be inordinately low. The Director of Special Education for the Fort Defiance Agency pointed out that children with health, vision, or physical impairments are generally not referred to the psychologists but are referred to the Indian Health Services and determination of their eligibility is made by IHS clinics.

The most frequent placement recommendation for special education was for a resource room a specified percentage of the day. Such a recommendation was given to 64% of the students tested in 1980, 43% in 1981, and 37% in 1982. The data on Table 3, page 29, indicate that during the course of the study, a greater frequency of alternative placements were recommended, particularly increased were recommendations for tutorial and peer instruction.

2. Short-Term Goals

One of the most important sections of the testing report addressed recommendations for short-term goals. This section is particularly important because it is the short-term goals that are most often transferred to the students' IEPs. For the purpose of the testing report, short-term goals were defined as those recommending immediate attention that should be accomplished within one year. Psychologists were asked to recommend short-term goals in the following areas: reading, writing and spelling, math, and others (see Table 3, page 31). The recommendations on testing reports for these goals were derived from the results of the tests administered. As a result, the area, the number, and the specificity varied for each child tested. Efforts were made to list the recommendations for short-term goals in a way that would

Table 3 (continued)

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
2. Short-Term Goals												
a. Recommendations to Improve Reading Skills												
General Improvement of Reading	11	18	16	13	26	33	63	34	15	8	50	24
Word Attack	58	62	35	55	30	42	25	35	40	27	17	26
Phonics Skills/Pronunciation and Blending	32	36	39	34	35	31	0	29	20	31	21	23
Increased Letter Identification, Sight-Word Vocabulary and Recognition, and Reversals	72	59	61	67	43	60	25	52	80	70	46	63
Functional/Survival Reading Skills (Newspapers, Magazines, etc.)	26	13	6	20	0	2	0	1	15	15	17	16
Improved Comprehension and Recall	16	28	25	20	4	23	0	15	30	27	17	23
SUBTOTAL	214	215	184	209	139	190	113	166	200	177	167	180
b. Recommendations to Improve Writing and Spelling Skills												
General Improvement of Spelling and/or Writing	13	10	3	10	47	20	13	28	10	15	21	16
Specific Spelling Improvements (Irregular Words, Plurals, etc.)	25	21	19	23	0	4	0	3	5	0	13	6
Writing Skills (Alphabet, Grammar, Mechanics, Words and Sentences from Dictation, etc.)	12	5	16	11	17	38	13	29	10	31	21	21
SUBTOTAL	49	36	39	44	65	63	25	59	25	46	54	43
c. Recommendations to Improve Math Skills												
General Improvement of Math Skills	13	5	13	11	17	25	50	25	15	8	21	14
Pre-Math Skills (Counting, Number Identification and Concepts)	9	3	6	7	4	6	0	5	0	8	17	9
Addition Facts (Single and Multiple Digits)	52	85	35	56	35	31	0	29	55	31	42	41
Subtraction Facts (Singular and Multiple Digits, Including Borrowing)	74	74	35	67	61	42	0	43	60	31	50	46

Table 3 (continued)

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
Multiplication Facts (Single and Multiple Digits)	26	49	32	33	30	27	25	28	50	19	42	36
Division Facts (Includes Long Division with Remainders)	25	31	32	28	35	21	38	27	30	23	33	29
Fractions (Includes Decimals)	5	5	16	7	0	0	0	0	10	4	8	7
Functional and Survival Math (Money, Time, Measurement, Calculator Use, etc.)	60	46	35	52	22	0	0	6	40	19	50	36
Story Problems	14	3	6	10	0	0	0	0	0	0	4	1
SUBTOTAL	277	300	97	271	204	152	113	163	260	142	267	219
d. Other Short-Term Goals												
Improvement of English Language Skills	0	15	0	3	9	23	50	22	45	27	25	31
English Reception	0	38	10	10	26	31	0	27	50	23	4	24
English Expression	29	33	3	26	35	29	0	28	45	23	4	23
Auditory Discrimination Training and Improvement	16	23	3	16	9	16	25	15	0	8	0	3
Visual-Motor Training (Includes Directionality)	25	18	16	22	22	25	13	23	25	19	4	16
Pre-academic Skills (Toileting, Dressing, Eating, Colors, Body Parts (Hygiene), etc.)	13	6	3	9	0	4	0	3	0	8	4	4
Vocational/Survival Skills	7	5	3	6	9	0	0	3	20	19	4	14
General Behavioral Skills (Includes Appropriate Class Behavior, Attention, Independence, Completion of Assignments, Responsibility and Attendance)	16	10	23	16	35	16	38	24	35	23	46	34
General Social Skills (Includes Self-Concept, Confidence, Interaction, and Participation)	18	13	29	19	43	33	50	38	50	15	21	27
SUBTOTAL	125	162	90	127	187	125	175	148	270	165	113	177
TOTAL	478	713	526	540	596	473	426	504	760	531	604	620

increase their usefulness to the IEP Committee. Thus, the recommendations for short-term goals were, in most cases, referred directly to instructional objectives in the STEP Program.

a. Reading

The most frequent recommendations made for short-term goals were for reading. Six categories were identified with word and letter recognition skills being most frequently recommended (see Table 3, page 31). Approximately two-thirds of the children referred and tested had deficits in word and letter recognition skills significant enough to warrant specific recommendations that the instructional program emphasize efforts to strengthen these skills. This emphasis was consistent throughout the course of the study. Recommendations for additional instructional emphasis in comprehension and survival reading was identified as a need much less frequently. These data suggest that the children tested had not mastered basic and elementary reading skills, thus, they were not ready to pursue intermediate reading skills. Figures in the subtotal category of reading instruction suggest that the average testing report contained approximately two recommendations for short-term goals addressing this need.

b. Writing and Spelling Skills

Recommendations for improving writing and spelling skills were made on approximately 20% of the reports. Writing skills were most frequently recommended. Specific spelling skills, i.e., irregular words, plurals, etc., were recommended in fewer instances, particularly during the latter two years of the study.

c. Math

The second most frequent recommendations were for math. Of the nine categories of math instruction recommended, instruction in elementary mathematic facts, including single and double digit addition facts, and subtraction facts, including borrowing and carrying, constituted two-thirds of the recommendations. The distribution of recommendations across math categories was similar throughout the study. Intermediate math skills were recommended in less than a third of the reports and the frequency of such recommendations did not change significantly during the study. Figures in the subtotal category of math skills indicate the average testing report contained two or more recommendations for math instruction.

d. Other Short-Term Recommendations

Other frequent recommendations included instruction for improving the child's use of the English language. Although English language skills are a major problem on the reservation, it is noted that a significant amount of time and effort is directed towards English language skill development in the curriculum. Some psychologists did not recommend additional instruction in this area for they were mindful of the amount of effort currently devoted to this area. Until basic reading and math skills are mastered, the need and the advisability of focusing additional goals on reading, writing, and language did not appear to be warranted.

3. Long-Term Goals

For the psychological report, long-term goals were defined as those goals identified for the student that may take more than a year to master. Long-term goals recommended were divided into 15 categories.

Table 3 (continued)

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
3. Long-Term Goals												
Improvement of English Language Skills (Receptive and Expressive, Auditory Discrimination)	42	44	26	40	57	69	38	62	65	61	38	54
Improvement in Academic Skills	42	36	29	38	30	40	0	33	5	50	25	29
General Improvement of Math Skills	37	49	42	41	39	38	63	41	55	38	33	41
Improvement of Specific Math Skills (Application, To Age or Grade Level, Addition, Multiplication, etc.)	24	13	0	17	0	2	13	3	55	38	54	49
General Improvement of Reading Skills	46	52	65	51	35	46	75	46	50	46	54	50
Improvement of Specific Reading Skills (Comprehension, Word Attack, Phonics, etc.)	25	21	0	20	0	0	0	0	30	42	46	40
General Improvement of Writing and Spelling Skills	16	21	0	14	30	21	50	27	25	23	38	29
Improvement of Specific Writing and Spelling Skills (Two and Three Letter Words, Irregular Words, Grammar, etc.)	14	13	0	11	0	0	0	0	0	15	4	7
Improved Social Skills (Self-Concept, Self-Confidence, Interaction, etc.)	59	23	29	45	65	40	38	47	45	31	21	31
Improved Behavioral Skills (Appropriate Class Behavior, Attention Span, Independence, Completion of Assignments, etc.)	19	33	26	23	13	31	63	29	30	31	17	17
Coordination and Visual-Motor Skills	13	8	19	13	4	22	0	8	15	19	0	11
Increased Participation (Includes Academic and Nonacademic)	1	3	0	1	0	2	0	1	0	15	8	9
Attendance Improvement in School	12	0	6	9	9	13	0	10	0	0	13	4
Independent/Survival Living or Work Skills	9	10	0	8	9	2	0	4	15	12	8	11
Vocational Skills	10	10	10	10	4	4	13	5	20	15	8	14
TOTAL	370	333	352	358	296	248	313	268	410	438	366	406

Table 3, page 35, indicates that the most common long-term goals recommended included improvement in the use of English language, math skills appropriate to the age and grade level of the child, and general improvement in reading. Approximately half of the reports contained recommendations for long-term instructional goals in math, reading, and English language. The next most frequently recommended long-term goals included improvement in social skills, general writing and spelling skills, and general improvement in academics. Long-term goals, for the most part, were less specific, but their pattern was very similar during the course of the study.

The subtotals category for long-term goals suggest that the average psychological report contained from three to four long-term goals.

4. Instructional Strategies and Materials

While testing each child, the psychologists were instructed to make notes of specific behaviors and learning styles of the child. Utilizing this information along with short- and long-term goals, psychologists were asked to identify specific instructional strategies or materials which they felt would capitalize on the child's learning strengths.

Table 3, page 37, identifies six categories of instructional strategies and materials. Specific instructional techniques, including auditory or visual approaches, and drill and practice exercises were recommended in approximately 25% of the reports. Behavior modification and management programs were recommended for approximately 30% of the cases. These percentages were relatively consistent during the course of the study. The specificity of programs and activities named in the reports increased throughout the three years of the project from only 6% in 1980 to 37% in 1982. This change suggests that psychologists

Table 3 (continued)

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
4. Instructional Strategies and Materials												
Small Group Instruction and/or Individual Instruction with Student or Peer Tutors	60	33	39	50	35	31	38	33	25	27	4	19
Increased or Decreased Time on Tasks	2	0	0	1	0	0	0	0	10	4	0	4
Specific Program or Activity Named	8	8	0	6	26	30	25	24	55	23	38	37
Title I Placement Materials	4	3	0	3	0	0	0	0	0	0	0	0
Behavior Modification or Management Program (Reinforcement, Incentives, etc.)	36	21	6	27	17	27	38	25	25	27	33	29
Specific Instructional Techniques (Visual-Motor, Auditory Approaches, Audio-Visual, Drill and Practice Exercises, Flashcards, etc.)	22	44	10	24	22	31	13	27	10	31	46	30
No Instructional Strategies Named	13	0	0	8	0	0	0	0	15	15	4	11
TOTAL	144	108	55	120	100	113	113	109	140	127	125	130
5. Support Services												
Visual Examination or Treatment	31	21	25	28	35	23	13	25	20	19	38	26
Hearing Examination or Treatment	36	38	29	35	30	38	50	11	30	65	38	46
Medical Examination or Treatment	10	3	0	6	4	8	25	9	25	8	4	11
Psychiatric Examination or Treatment	1	0	0	1	0	2	0	1	0	0	4	1
Speech Therapy and/or Assessment	5	3	0	3	4	16	38	15	20	0	8	9
Counseling	31	3	16	22	30	31	25	30	50	19	29	31
Behavior Consultant (For Behavior Modification)	6	3	16	7	13	6	13	9	0	0	4	1
TOTAL	121	69	87	103	117	125	163	127	145	112	125	126

increased in their specificity of instructional strategies and materials which they felt would assist in remediating the child's difficulties.

5. Support Services

During testing, psychologists are provided an opportunity to observe the child under a variety of conditions: direct instruction, independent work, problem solving, pressures of expectations, and time constraints. Through such observations, various health, behavior, or psychological problems can be identified. The Support Services Section on the testing report requested the psychologist to give recommendations for special services such as medical exams, physical therapy, consultation, and hearing evaluations that would not normally be provided by the teacher in special education. Table 3, page 37, identifies seven categories of specific support services recommended. The most frequently recommended support services were for hearing examinations or treatment. Approximately 35% of the students tested were recommended as needing additional hearing examinations and/or treatment. Counseling was recommended in approximately 30% of the cases followed by visual examinations. The average number of support services recommended on each report was one and a half.

6. Evaluation Criteria for Success

The final section of the Psychological Testing Report Format requested psychologists to identify the criteria needed to evaluate the success of the child's educational program. Seven categories of recommendations were identified. The most frequently recommended criteria for success was improvement in academic skills, with approximately 80% of the testing reports making this a recommendation. Improved social behavior was recommended in approximately 30% of the reports, and improved

Table 3 (continued)

Categories Findings and Recommendations Taken From Testing Reports	1980				1981				1982			
	Chuska N = 102	Tohatchi N = 39	Greasewood N = 31	Total # of Rpts Reviewed N = 172	Chuska N = 23	Tohatchi N = 48	Greasewood N = 8	Total # of Rpts Reviewed N = 79	Chuska N = 20	Tohatchi N = 26	Greasewood N = 24	Total # of Rpts Reviewed N = 70
6. Evaluation Criteria for Success												
Improved Academics Skills	72	69	67	70	96	90	88	91	90	82	100	94
Improved Communication and Language Skills (Receptive, Expressive, and Auditory Discrimination)	22	8	3	15	0	6	13	5	35	35	21	30
Increased Participation (Academic and Nonacademic)	6	3	0	4	0	0	0	0	5	4	8	6
Improved Social Skills (Interaction, Self-Concept, Self-Confidence, etc.)	40	10	6	27	17	6	0	9	45	31	29	34
Improved Behavioral Skills (Appropriate Behavior, Attention Span, Independent Class Work, Responsibility, and Completion of Assignments)	31	26	39	31	52	35	50	42	20	27	33	27
Vocational and Independent Living Skills	8	8	10	8	0	4	0	3	10	19	8	11
Improved Visual-Motor Coordination Skills	17	5	6	12	0	8	0	5	10	4	0	4
TOTAL	195	141	132	122	70	150	150	127	215	212	200	209

communications and language skills were recommended in approximately 20% of the reports. Improved independent living and vocational skills, motor coordination, and self-concept were recommended to a lesser extent. This finding may reflect the age of the children tested and the fact that most of the deficits observed on the children were in the early academic areas of reading, math, and language.

The second and third method of collecting data to determine Objective 1, i.e., the strengths and weaknesses of the psycho-educational assessment report system and process for the Fort Defiance Agency, included:

1. A critique of a sample of test reports utilizing the Test Report Critique Form by a sample of school personnel from the target schools.
2. A structured interview in which comments, suggestions, recommendations and criticisms were solicited.

Since these data served as the baseline to determine the impact of the study, these data will be reported along with changes that occurred when the same data were collected at midpoint and at the end of the project in Objective 3, Tables 4 through 14.

Objective 2 - Based on the Assessment Data Collected in Objective 1, An Instructional Program Will Be Designed to Train: (A) Teaching and Administrative School Personnel, and (B) School Psychologists

The second objective of this study was to provide inservice training designed to improve the usefulness and utilization of individual testing reports by the school staff in the Fort Defiance Agency and the psychologists who provided testing to the agency. To accomplish this objective, two workshops and two seminars were planned.

1. Inservice Workshop I

The first inservice workshop and seminar were provided during the summer of 1981 (school personnel and psychologists). The second workshop and seminar were provided to similar groups of people during the summer of 1982. The original proposal indicated that the content of the inservice training workshop and seminar for both school personnel and ECC psychologists was to be identified from the data collected for Objective 1. Following the analysis of the 1980 testing reports, several specific needs were identified by the principal investigator and the director of special education that were felt would improve the relevance and utilization of psychological testing reports by the Fort Defiance school personnel. As a result of this analysis, the first inservice training workshop was designed and presented August 11-14, 1981, to the school personnel of the Fort Defiance Agency. Topics addressed in Workshop I included the following:

- a. Statement of the Referral Question: The data collected and analyzed from Objective 1 emphasized the relationship between a well stated referral question and the usefulness of the resulting testing report. For the most part, the specificity of answers in the reports corresponded closely to the specificity of questions asked by school personnel. When referral questions were vague and general, findings and recommendations in the testing reports were rated by school personnel as vague and general. On the other hand, when referral questions were specific, these data suggest that school personnel needed information on methods of identifying and stating referral questions. The workshop presented information on the importance of the referral question, examples of good and bad referral questions,

along with a series of exercises in which participants prepared and critiqued referral questions (see Resource Manual, pages 41-43).

- b. Location and Access to Testing Reports: Table 4, page 43, indicates that 40% of the school personnel interviewed in 1981 had never referred to a testing report and did not know that they were available. In addition, 20% indicated that they did not refer to the testing report because the information they needed was provided by another school staff member (school psychologist, supervisor, administrator or the director of special education).

In response to these findings, information concerning the location of the testing data in the school, who had access to it, and how it was to be used was presented in the workshop (see Resource Manual, pages 212-213).

- c. Bias in Testing: Verbal comments from school personnel expressed concern about using standardized tests. They emphasized the lack of confidence school personnel had in standardized tests. The school personnel interviewed were particularly sensitive to bias in testing due to cultural or language factors. Their comments suggested they were overly concerned and overemphasized the limitations and problems of standardized tests. Accompanying this was evidence that school personnel were unaware of the great efforts to reduce bias in instruments and procedures and attempts to use other assessment options rather than standardized tests. The workshop provided information to school personnel on efforts to minimize bias in testing both procedurally and in the selection of instruments, and demonstrations of nonbiased testing along with the use of other assessment instruments (see Resource Manual, page 3).

Table 4

The Extent School Personnel Used Psycho-Educational
Testing Reports During the School Year

Extent To Which Testing Reports Were Used	Chuska			Tohatchi			Greasewood			Total			t 80-82	DF
	1980 N = 12 %	1981 N = 13 %	1982 N = 7 %	1980 N = 5 %	1981 N = 16 %	1982 N = 8 %	1980 N = 4 %	1981 N = 9 %	1982 N = 5 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %		
Never Used, Didn't Know They Were Available	0	0	0	40	6	13	75	33	40	24	11	15	.73	39
Never Used, Needed Information Came From Consultation	58	23	0	20	13	13	0	44	20	38	24	10	2.23*	39
Used Once at IEP Meeting	17	31	43	20	38	38	25	11	40	19	29	40	1.51	39
Used Often for IEP Development	17	23	43	20	31	23	0	11	0	14	24	25	.89	39
Used Several Times During a Year	3	23	14	0	12	13	0	0	0	5	12	10	.61	39

*p<.05

- d. Using Test Reports in Writing IEPs: Table 4 indicated that in 1980, only 19% of the school personnel reported they used testing reports in the IEP meeting. It was felt that this low rate of using testing reports for developing IEPs was partially due to school personnel not knowing how to abstract and utilize testing report data in the development of IEPs.

To address this issue, a series of simulation exercises were designed in which testing reports were provided and participants were asked to develop the IEP from the testing report data (see Resource Manual, pages 101 through 115).

- e. Other Topics: In addition to the other four topics, the workshop agenda included video-tape presentations with accompanying work activities on the role of the regular teacher in special education, P. L. 94-142, and the philosophy and rationale for individual assessment.

- f. Evaluation of the Inservice Workshop

At the completion of each component of the workshop, participants were asked to evaluate it. The evaluation is contained on pages 129 through 140 of the Resource Manual. The results of the workshop evaluation, together with informal comments, criticisms, and recommendations were collected and analyzed.

The evaluation results suggest that the first workshop was well received and participants felt it was interesting and relevant. Logistical problems such as timing, location and equipment effected the comfort of participants. A careful record was maintained by the workshop director and each presenter, listing suggestions for

conducting future workshops. These suggestions were implemented in the 1982 inservice training workshops.

2. Seminar I

The first seminar was designed for the psychologists from the Exceptional Child Center selected to provide psychological testing for the Fort Defiance Agency in the fall of 1981. This seminar was conducted August 27, 1981 with primary emphasis focusing on: (a) obtaining and interpreting referral information, background information from student records, interviewing teachers and Navajo children, (b) interpretation of resource material including the STEP Program, the Brigance and other instructional materials widely used by the Fort Defiance Agency, (c) correlating test findings and recommendations with specific goals and subgoals in the STEP Program, and (d) how and when to utilize a Navajo interpreter.

The above topics were identified by the principal investigator and the director of special education in the Fort Defiance Agency by analyzing data and informal comments of school personnel interviewed (see Resource Manual, pages 254 through 266).

3. Inservice Workshop II

The second workshop was designed for school personnel of the Fort Defiance Agency and presented August 11-12, 1982. The content of this inservice workshop was similar to that of the first workshop. It again focused on the referral question, bias in testing, and utilizing testing results in writing IEPs. However, it was not felt necessary to include in the agenda a discussion of the location and accessibility of testing reports, etc. Thus, extra topics were added that included Public Law

94-142 and instructional evaluation (precision teaching) (see Resource Manual, pages 142 through 233).

To evaluate the second workshop, a pre- and posttest was developed. The results of the workshop evaluation are presented in the Resource Manual, pages 234 through 248.

4. Seminar II

The second seminar was provided to the school psychologists selected to provide psychological services to the Fort Defiance Agency in the fall of 1982. This seminar was conducted on August 28, 1982. The content of the seminar was similar to the first seminar provided to school psychologists in 1981. The most significant emphasis of the 1982 seminar was on writing and editing testing reports. Simulated exercises were provided for writing testing reports and conducting meaningful "high-speed staffings" to report test results and obtain additional information from school personnel. The agenda for the second school psychologists seminar, exercises, resource material, etc. is provided in the Resource Manual, pages 279 through 321.

Objective 3 - As a Result of the Training Conducted in Objective 2, Testing Results Will Be Found to Be More Valuable in Making Decisions Concerning the Placement of Native American Students in Special Education Programs

The third and final objective of this project was to determine the impact the project made in improving the utilization and educational relevance of individual psycho-educational assessment in placing and developing IEPs for handicapped Native American children. The original grant proposal identified four broad criteria by which the impact of the intervention activities, i.e., change in the individual testing process and testing

format, and inservice training provided school personnel and ECC psychologists, of the project could be determined:

1. As a result of the intervention activities, the testing results will be used more frequently by school personnel.
2. As a result of the intervention activities, testing reports will be perceived by school personnel as being more usable and understandable.
3. At the completion of the project, there will be a greater relationship between the instructional program proposed in the IEPs of students and those recommended on the psycho-educational testing reports.
4. At the completion of the project, referral forms, testing reports, and other procedures used to communicate individual test findings and recommendations will have been improved.

To determine the impact of the project, baseline data was collected in March of 1981. These same data were collected once again in February 1982 and again at the end of the project in November 1982. The differences between the data collected at the beginning of the project, at midpoint, and at the conclusion of the project were compared to determine the impact of the intervention activities initiated by the project.

By utilizing three observations, trends in the data could be more clearly determined and appropriate changes could be initiated during the project to improve the usability and relevance of individual assessment.

This section will address the data collected and findings which address the four criteria selected to determine the impact of the study.

1. As a result of the intervention activities, the testing results will be used more frequently by school personnel

Two techniques were proposed to determine the extent psychological testing reports were used by school personnel: (a) counting and then

comparing the number of times School personnel checked out testing reports from the building testing file, and (b) asking school personnel utilizing a questionnaire and a follow-up interview.

Counting and recording the number of times school personnel checked out testing reports proved to be more difficult than originally anticipated because more than one copy of the testing report was available in the district. Often the testing report used came from the district office and there was no need to check out the building copy. In addition, subsections of reports were sometimes copied and summarized and utilized in IEP meetings. Furthermore, there was no consistent way of monitoring whether people actually did sign out before using testing reports placed in the building testing file.

As a result, data to determine the extent and the purpose for which psychological testing reports were used during the course of the study were obtained by utilizing an interview and a questionnaire. These data are presented on Table 4, page 43, and Table 5, page 49. Table 4 indicates that in 1980, 24% of the staff interviewed had never used testing reports and did not know that they were available or that they had access to them. An additional 38% indicated that they never referred to psychological testing reports because the information they needed came from consultation with other people in the agency (director of special education, principal, school psychologists, counselors). Of those school personnel who reported they did use psychological testing reports, 19% reported that they had used them once at the IEP meeting, 14% used them often for IEP development, and only 5% used the reports several times during the year.

Table 5
The Purpose School Personnel Refer to
Psycho-Educational Testing Reports

	Chuska			Tohatchi			Greasewood			Total			t 80-82	DF
	1980 N = 12 %	1981 N = 13 %	1982 N = 7 %	1980 N = 5 %	1981 N = 16 %	1982 N = 8 %	1980 N = 4 %	1981 N = 9 %	1982 N = 5 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %		
Purpose Reports Were Used														
Did Not Refer to the Test Reports	50	38	0	60	19	37	75	33	40	57	29	25	2.21*	39
To Determine Eligibility for Special Education	50	62	100	40	81	63	25	67	60	43	71	75	2.21*	39
To Obtain General Information on Ability and Achievement	17	23	14	20	50	25	0	22	20	14	34	20	.51	39
To Help Identify Problems and Causes	8	23	51	20	19	13	25	11	20	14	18	30	1.26	39
To Find Recommendations for Planning	8	15	29	0	13	13	0	11	11	5	11	20	1.48	39

*p<.05

During the course of the study, the extent that school personnel used testing reports increased. In 1982, the number of people who reported they never used testing reports and obtained needed testing information from some other source reduced significantly.

Table 5 presents data on the purpose for which school personnel used psycho-educational testing reports. These data indicate that the percentage of school personnel who reported that they did not use the testing reports reduced significantly during the course of the study and the percentage of school personnel who reported using testing reports to determine eligibility for special education increased significantly. Although not statistically significant, the data indicate a trend for school personnel to increase their utilization of testing reports to obtain information on student achievement and ability, and to help identify problems and to find recommendations for planning. This suggests that at the conclusion of the study, teachers were using testing reports for more sophisticated purposes.

2. As a Result of the Intervention Activities, Testing Reports Will Be Perceived by School Personnel as Being More Usable and Understandable

Data to determine if the project resulted in testing reports perceived by school personnel as being more usable and understandable were collected by using the Psycho-Educational Testing Report Critique Form. The Testing Report Critique Form contained items to evaluate the following five subobjectives.

a. To What Extent School Personnel Felt Individual Sections of the Testing Report Met Their Information Needs

Table 6, page 51, provides a summary of how school personnel felt the specific sections of the psycho-educational testing reports

Table 6

School Personnel Evaluation of the Separate Sections of the Psycho-Educational Reports

"A"

The Extent School Personnel Felt Excerpts of Specific Sections of the Report Met Their Information Needs

				VERY WELL, Every Objective Was Met			GOOD, Most of the Objectives Were Met			FAIR, A Few of the Objectives Were Met			POOR, Almost None of the Objectives Were Met			No Response		
				1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %
A. Referral Information																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	50	38	43	42	38	29	8	23	29	0	0	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	20	31	75	60	44	25	20	19	0	0	6	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	25	39	40	25	55	60	0	11	0	25	0	0	25	0	0
Total	N = 21	N = 38	N = 20	38	34	55	43	45	35	10	18	10	5	3	0	5	0	0
B. Background Information																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	42	7	43	25	69	57	17	15	0	17	8	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	40	25	75	60	44	25	0	31	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	5	33	40	25	33	40	0	33	20	0	0	0	25	0	0
Total	N = 21	N = 38	N = 20	43	21	55	33	50	40	10	26	5	10	3	0	5	0	0
C. Behavioral Observations																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	67	77	57	16	23	43	8	0	0	0	0	0	8	0	0
Tohatchi	N = 5	N = 16	N = 8	100	50	75	0	38	25	0	6	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	50	55	80	25	44	20	0	0	0	0	0	0	25	0	0
Total	N = 21	N = 38	N = 20	71	61	70	14	34	30	5	3	0	0	0	0	10	0	0
D. Psycho-Educational Findings																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	75	77	57	8	23	43	17	0	0	0	0	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	100	56	88	0	44	12	0	0	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	50	55	60	0	44	40	25	0	0	0	0	0	25	0	0
Total	N = 21	N = 38	N = 20	76	61	70	5	37	30	14	0	0	0	0	0	5	0	0
E. Summary																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	58	62	86	33	62	14	8	0	0	0	0	0	0	8	0
Tohatchi	N = 5	N = 16	N = 8	80	38	100	20	63	0	0	0	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	25	67	80	50	33	20	0	0	0	0	0	0	25	0	0
Total	N = 21	N = 38	N = 20	57	53	90	33	45	10	5	0	0	0	0	0	5	3	0
F. Recommendations																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	66	62	71	16	31	14	16	8	14	0	0	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	100	44	100	0	44	0	0	13	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	25	77	100	0	22	0	25	0	0	25	0	0	25	0	0
Total	N = 21	N = 38	N = 20	67	58	90	10	32	5	14	8	5	5	0	0	5	0	0
G. Diagnostic Statement																		
	1980	1981	1982															
Chuska	N = 12	N = 13	N = 7	66	69	43	8	23	43	25	0	14	0	8	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	80	50	100	20	44	0	0	6	0	0	0	0	0	0	0
Greasewood	N = 4	N = 9	N = 5	0	55	80	50	44	20	25	0	0	0	0	0	25	0	0
Total	N = 21	N = 38	N = 20	57	58	75	19	37	20	19	3	5	0	3	0	5	0	0

met their information needs. Responses to questions concerning the seven subsections of the psycho-educational testing report for 1980 indicate that approximately 58% were in the most favorable category. The value of referral information was rated in the most favorable category by only 38% of respondents. The most favorable subsection of the testing reports as evidenced by ratings in the most favorable category was the psycho-educational testing findings in which 76% felt this section met their information needs very well.

The percentage of responses in the most favorable category increased during the course of the study for subsections of the reports addressing referral information, background information, summary, recommendations, and the diagnostic statement. There was little change in the percentage of responses in the most favorable category on behavioral observations, and a slight decrease in the percentage of respondents in the most favorable category on psycho-educational findings. Table 6 further indicates a reduction in the percentage of people who responded in the least favorable categories during the course of the study and the number of no responses reduced significantly.

To determine if the change that occurred in the ratings of reviewers between 1980 and 1982 was significant, the difference between independent sample proportions t test was used.

$$t = \frac{P_1 P_2}{\sqrt{\frac{P_1 Q_1}{N-1} + \frac{P_2 Q_2}{N-2}}}$$

Tables 6a, 6b, and 6c indicate that the more favorable ratings of reviewers between 1980 and 1982 of the referral, background, and behavioral information sections on the tests were not significant at the .05 level. A general trend for school personnel to evaluate these sections in the more favorable category as the project continued was, however, noted. Concomitant with this was a decrease in the percentage of reviewers who rated the prementioned sections as either fair or poor.

Table 6a

**The Extent School Personnel Felt the Referral
Information in the Reports Met Their Information Needs**

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objective Was Met	38	34	55	1.11	39
Good, Most Objectives Were Met	42	45	35	.46	39
Fair, A Few of the Objectives Were Met	10	18	10	0	39
Poor, Almost None of the Objectives Were Met	5	3	0	1.05	39
No Response	5	0	0	1.05	39

$p < .05$

Table 6b

The Extent School Personnel Felt the Background Information in the Reports Met Their Information Needs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objective Was Met	43	21	55	.77	39
Good, Most Objectives Were Met	32	50	40	.53	39
Fair, A Few of the Objectives Were Met	10	26	5	.61	39
Poor, Almost None of the Objectives Were Met	10	3	0	1.53	39
No Response	5	0	0	1.05	39

$p < .05$

Table 6c

The Extent School Personnel Felt the Behavioral Observations in the Reports Met Their Information Needs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objective Was Met	71	62	70	.07	39
Good, Most Objectives Were Met	14	35	30	1.26	39
Fair, A Few of the Objectives Were Met	5	3	0	1.05	39
Poor, Almost None of the Objectives Were Met	0	0	0	0	--
No Response	10	0	0	1.53	39

$p < .05$

The extent school personnel felt that the psycho-educational findings section of the reports met their information needs throughout the course of the study did not present a clear trend. The percentage rating this section in the most favorable category decreased while the second most favorable category (Good, Most Objectives Were Met) showed a significant positive change. This change resulted primarily from a reduction in 1982 of the responses rating the psycho-educational findings section as fair or poor.

Table 6d

The Extent School Personnel Felt the Psycho-Educational Findings in the Reports Met Their Information Needs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objective Was Met	76	62	70	.43	39
Good, Most Objectives Were Met	5	38	30	2.21*	39
Fair, A Few of the Objectives Were Met	14	0	0	1.85	39
Poor, Almost None of the Objectives Were Met	0	0	0	0	--
No Response	5	0	0	1.05	39

* $p < .05$

Table 6e indicates that significant improvement occurred, in the opinion of reviewers, of the summary section of the psychological testing reports. Significantly higher ratings were accompanied by reductions in the less favorable categories during the course of the study.

Table 6e

The Extent School Personnel Felt the Summary
Section in the Reports Met Their Information Needs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objectives Was Met	57	53	90	2.60*	39
Good, Most Objectives Were Met	23	44	10	1.88	39
Fair, A Few of the Objectives Were Met	5	0	0	1.05	39
Poor, Almost None of the Objectives Were Met	0	0	0	0	--
No Response	5	3	0	1.05	39

* $p < .05$

Although it appeared that the recommendations section of the testing reports were rated as more favorable at the conclusion than at the beginning of the study, this change was not statistically significant. The expected trend towards improvement in the recommendations section are somewhat confounded by the 1981 data.

Table 6f

The Extent School Personnel Felt the Recommendations
in the Reports Met Their Information Needs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objectives Was Met	67	58	90	1.86	39
Good, Most Objectives Were Met	10	32	5	.61	39
Fair, A Few of the Objectives Were Met	14	8	5	1.0	39
Poor, Almost None of the Objectives Were Met	5	0	0	1.05	39
No Response	5	0	0	1.05	39

$p < .05$

The data on Table 6g suggest that school personnel felt the diagnostic statement section of the testing reports improved, but the percentage of reviewers who rated this section more positively was not significant.

Table 6g

**The Extent School Personnel Felt the Diagnostic
Statement in the Reports Met Their Information Needs**

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Well, Every Objective Was Met	57	58	75	1.24	39
Good, Most Objectives Were Met	19	36	20	.08	39
Fair, A Few of the Objectives Were Met	19	3	5	1.42	39
Poor, Almost None of the Objectives Were Met	0	3	0	0	--
No Response	5	0	0	1.05	39

$p < .05$

b. The Extent School Personnel Felt Excerpts From Specific Sections of
the Reports Were Useful in Preparing Students' Educational
Programs

To identify the sections that were specifically useful and for what purpose they were useful, school personnel evaluated not only how well specific sections of the testing reports met their needs, but also how useful these sections were in preparing the students' IEPs. Table 7 presents a summary of these data.

Table 7 indicates that in 1980 approximately 65% of the respondents felt the information contained in the various sections of the psychological reports was "very useful" in preparing students' IEPs. In 1982, approximately 85% of the respondents rated the various sections of the testing reports as very useful in preparing IEPs. Table 7 also indicates a substantial reduction in the number of reviewers who did not make a response to this series of questions.

Table 7

School Personnel Evaluation of the Separate Sections of the Psycho-Educational Reports

"B"

The Extent School Personnel Felt Excerpts of Specific Sections of the Reports Were Useful in Preparing Students' Educational Programs

				VERY USEFUL, It Helped A Great Deal and Was Necessary			SOMEWHAT USEFUL, But Was Not Really Necessary			NOT USEFUL, And Was Not Necessary			No Response		
				1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %
A. Referral Information															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	58	61	57	42	23	43	0	8	0	0	8	0
Tohatchi	N = 5	N = 16	N = 8	80	56	88	20	38	12	0	0	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	25	67	100	25	22	0	25	11	0	25	11	0
Total	N = 21	N = 38	N = 20	57	60	80	33	30	20	5	3	0	5	8	0
B. Background Information															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	67	62	57	25	30	43	8	8	0	0	0	0
Tohatchi	N = 5	N = 16	N = 8	80	44	88	20	44	12	0	6	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	50	33	100	0	55	0	25	0	0	25	11	0
Total	N = 21	N = 38	N = 20	67	47	80	19	42	20	10	5	0	5	5	0
C. Behavioral Observations															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	58	77	71	33	8	29	0	8	0	8	8	0
Tohatchi	N = 5	N = 16	N = 8	100	62	100	0	25	0	0	0	0	0	12	0
Greasewood	N = 4	N = 9	N = 5	50	77	60	0	11	40	25	0	0	25	11	0
Total	N = 21	N = 38	N = 20	67	71	80	19	16	20	5	3	0	10	10	0
D. Psycho-Educational Findings															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	58	77	86	33	15	14	0	8	0	8	0	0
Tohatchi	N = 5	N = 16	N = 8	100	81	100	0	12	0	0	0	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	25	77	100	0	11	0	50	0	0	25	11	0
Total	N = 21	N = 38	N = 20	62	78	95	19	16	5	10	3	0	10	5	0
E. Summary															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	58	62	100	41	23	0	0	8	0	0	8	0
Tohatchi	N = 5	N = 16	N = 8	100	75	100	0	19	0	0	0	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	25	88	100	25	0	0	25	0	0	25	11	0
Total	N = 21	N = 38	N = 20	62	74	100	29	16	0	5	3	0	5	8	0
F. Recommendations															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	66	77	86	33	8	0	0	8	0	0	8	14
Tohatchi	N = 5	N = 16	N = 8	100	75	100	0	19	0	0	0	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	25	88	80	0	11	0	50	0	20	25	0	0
Total	N = 21	N = 38	N = 20	67	79	90	19	13	0	10	3	5	5	6	5
G. Diagnostic Statement															
	1980	1981	1982												
Chuska	N = 12	N = 13	N = 7	75	69	57	25	15	29	0	8	0	0	8	14
Tohatchi	N = 5	N = 16	N = 8	100	81	100	0	13	0	0	0	0	0	6	0
Greasewood	N = 4	N = 9	N = 5	25	66	100	25	11	0	25	0	0	25	22	0
Total	N = 21	N = 38	N = 20	71	74	85	19	13	10	5	3	0	5	11	5

The changes between the 1980 and the 1982 evaluations of the referral section, background information, and behavioral observations show a trend towards more favorable categories by a reduction in the percentage of respondents rating these sections as not useful (see Tables 7a, 7b, and 7c).

Table 7a

The Extent School Personnel Felt the Referral Information in the Reports Was Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	57	60	80	1.64	39
Somewhat Useful, But Not Really Necessary	33	30	20	.96	39
Not Useful, and Was Not Necessary	5	3	0	1.05	39
No Response	5	7	0	1.05	39

$p < .05$

Table 7b

The Extent School Personnel Felt the Background Information in the Reports Was Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	67	48	80	.96	39
Somewhat Useful, But Not Really Necessary	18	42	20	.16	39
Not Useful, and Was Not Necessary	10	5	0	1.53	39
No Response	5	5	0	1.05	39

$p < .05$

Table 7c

The Extent School Personnel Felt the Behavioral Observations
in the Reports Were Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	67	71	80	.96	39
Somewhat Useful, But Not Really Necessary	18	16	20	.16	39
Not Useful, and Was Not Necessary	5	3	0	1.05	39
No Response	10	10	0	1.53	39

$p < .05$

The psycho-educational findings section of the testing reports
was evaluated as significantly more useful in preparing students'
IEPs in 1982 than in 1980 (see Table 7d).

Table 7d

The Extent School Personnel Felt the Psycho-Educational
Findings in the Reports Were Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	62	77	95	2.83*	39
Somewhat Useful, But Not Really Necessary	18	15	5	1.34	39
Not Useful, and Was Not Necessary	10	3	0	1.53	39
No Response	10	5	0	1.53	39

* $p < .05$

Table 7e shows a very significant change in how useful school personnel felt the summary section of the reports was in preparing IEPs. These data indicate that the summary section was considered to be very useful, helped a great deal, and was necessary in preparing IEPs by 100% of the respondents in 1982.

Table 7e

The Extent School Personnel Felt the Summary Section in the Reports Was Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980, 82	DF
Very Useful, It Helped A Great Deal and Was Necessary	62	74	100	3.59*	39
Somewhat Useful, But Not Really Necessary	28	16	0	2.86*	39
Not Useful, and Was Not Necessary	5	3	0	1.05	39
No Response	5	7	0	1.05	39

*p<.05

The recommendations section and the diagnostic statement section of the testing reports were evaluated as more positive in the 1982 data than in 1980 but the degree of change or improvement was slightly less than significant. The change suggests a trend that these two sections were more effectively meeting the needs of school personnel and were considered more useful in preparing IEPs in 1982 than 1980 (see Table 7f and 7g).

Table 7f

The Extent School Personnel Felt the Recommendations
in the Reports Were Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	67	79	90	1.88	39
Somewhat Useful, But Not Really Necessary	18	12	0	2.15*	39
Not Useful, and Was Not Necessary	10	3	5	.61	39
No Response	5	6	5	0	39

* $p < .05$

Table 7g

The Extent School Personnel Felt the Diagnostic Statement
in the Reports Was Useful in Preparing IEPs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful, It Helped A Great Deal and Was Necessary	71	74	85	1.10	39
Somewhat Useful, But Not Really Necessary	19	13	10	.83	39
Not Useful, and Was Not Necessary	5	3	0	1.05	39
No Response	5	10	5	0	39

$p < .05$

c. The Extent School Personnel Felt the Psycho-Educational Testing
Reports Were Accurate and Appropriate

Research literature concerning psychological testing reports
points out that the most important information is contained in the

findings and recommendations sections (Fischer, 1976). To improve the test report findings and recommendations, school personnel were asked to evaluate the accuracy and appropriateness of verbatim statements from these sections.

Table 8, page 65, presents summary data evaluating the extent school personnel felt that verbatim recommendations from the psycho-educational testing reports were at the appropriate level of specificity, provided new information, were realistic given available resources and were useful in developing students' IEPs.

The first evaluation question addressed the appropriateness of the specificity of each verbatim recommendation. Although the percentage of responses indicating verbatim recommendations were "vague" or "too specific" decreased during the study, the percentage indicating the recommendations were "appropriately specific" increased only slightly. This change was not significant.

Table 8a

**The Extent School Personnel Felt the Recommendations
in the Reports Were Appropriately Specific**

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Appropriate	84	93	88	.89	236
Too Specific	5	2	6	.34	236
Vague	11	5	6	1.40	236
No Response	0	0	0	0	--

$p < .05$

One frequent criticism of psychological testing reports is that not enough information is not provided users. School personnel often

Table 8

**School Personnel Evaluation of the Accuracy and Appropriateness
of the Recommendations in the Psycho-Educational Reports**

Percent of the Recommendations Rated in Each Category	Is the recommendation at an appropriate level of specificity?				Based on your expe- rience with this stu- dent, does this recom- mendation provide you with new information?				Given the resources, how realistic is this recommendation?				How useful was this recommendation in developing this stu- dent's individualized education program?			
	Appropriate %	Too Specific %	Vague %	No Response %	New Information %	Confirmation %	No New Information %	No Response %	Realistic %	Somewhat Realistic %	Completely Unrealistic %	No Response %	Very Useful %	Somewhat Useful %	Not Very Useful %	No Response %
Chuska																
1980 - N = 12 R = 75	81	4	15	0	15	56	17	12	64	23	3	11	65	21	13	0
1981 - N = 13 R = 70	89	6	6	0	9	87	4	0	81	10	6	3	47	41	6	6
1982 - N = 7 R = 38	92	0	3	5	21	55	8	16	68	26	0	5	63	11	24	3
Tohatchi																
1980 - N = 5 R = 35	97	3	0	0	17	23	20	40	100	0	0	0	100	0	0	0
1981 - N = 16 R = 99	93	1	6	0	13	51	19	17	77	15	1	6	58	18	7	17
1982 - N = 8 R = 41	93	7	0	0	32	66	2	0	76	0	24	0	98	2	0	0
Greasewood																
1980 - N = 4 R = 20	70	10	20	0	30	35	25	10	45	20	10	25	45	35	5	15
1981 - N = 9 R = 58	98	0	2	0	14	47	19	21	67	21	0	12	55	34	2	9
1982 - N = 5 R = 30	73	10	17	0	23	63	13	0	50	33	17	0	100	0	0	0
Totals																
1980 - N = 21 R = 130	84	5	11	0	18	44	19	19	71	16	3	10	72	18	8	2
1981 - N = 38 R = 227	93	2	5	0	12	61	15	12	76	15	2	7	54	30	5	11
1982 - N = 20 R = 108	88	6	6	0	26	62	7	5	67	18	13	2	87	5	8	0

N = The number of school personnel interviewed.

R = The total number of recommendations that were taken verbatim from the testing reports for each school each year.

% = The percentage of the total number of recommendations "R" in each category each year.

complain that they can predict the psychologist's findings and recommendations long before the child is referred (Fifield, 1982). If testing reports are to be relevant and useful, they should provide new information to the users or confirm their professional judgements about students' academic needs. Therefore, to improve the usefulness and relevancy of test report information, activities of the project should result in increased new information for school personnel or information confirming prior suspicions or judgments about students' needs.

Table 8b indicates that during the course of the study, reviewers felt there was a significant reduction in the percentage of recommendations already known to the users or recommendations that they were certain would be recommended. Concomitantly there was a significant improvement in the percentage of recommendations and findings which confirmed prior judgements and suspicions of school personnel. Although there was a slight increase in the percentage of school personnel who felt that the recommendations provided new information, this increase was not significant.

Table 8b

The Extent School Personnel Felt the Recommendations in the Reports Provided New Information About the Students

Response	1980 %	1981 %	1982 %	t 1980-82	DF
New Information	18	12	26	1.48	236
Confirmation	44	61	62	2.82*	236
No New Information	19	15	7	2.84*	236
No Response	19	12	5	3.47*	236

*p<.05

Recommendations contained in psychological testing reports are often criticized because school personnel feel they are unrealistic with the existing resources on the reservation. Table 8c provides data in which school personnel evaluated how realistic verbatim recommendations from the reports were with the existing resources on the reservation. These data suggest that efforts to improve recommendations to make them more realistic were not successful. A significantly higher percentage of school personnel rated recommendations as completely unrealistic at the conclusion of the project than at the beginning, and the percentage of recommendations rated as realistic reduced slightly.

Table 8c

The Extent School Personnel Felt the Recommendations Were Realistic Considering the Given Resources

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Realistic	71	76	67	.66	236
Somewhat Realistic	16	15	18	.41	236
Completely Unrealistic	3	2	13	2.80*	236
No Response	10	7	2	2.71*	236

*p<.05

Table 8d provides data that evaluates the extent school personnel felt the recommendations were useful in developing students' IEPs. The table shows a significant increase in the percentage of responses in the most favorable category at the completion of the study. These data appear inconsistent with the data contained on Table 8c, for a literal interpretation would

suggest that even though school personnel felt the recommendations were less realistic with existing conditions and resources, they were more useful in helping them develop the students' IEPs.

Table 8d

The Extent School Personnel Felt the Recommendations Were Useful in Developing the Students' Educational Programs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful	72	54	87	2.94*	236
Somewhat Useful	18	30	5	3.28*	236
Not Very Useful	8	5	8	0	236
No Response	2	11	0	1.63	236

*p<.05

d. Evaluation by School Personnel of the Clarity, New Information, Accuracy, and Usefulness of the Findings on Testing Reports

To determine the clarity, new information, accuracy, and usefulness of the findings of testing reports, reviewers were asked to respond to four evaluative questions. These data are presented in Table 9, page 69. Although certain sections and criteria improved significantly, a consistent trend for improvement was not indicated by school personnel evaluating the results section of the testing reports.

At the beginning of this study, slightly over half of the respondents reported that they could understand "very clearly" what the psychologists meant when they read the verbatim findings. At the end of the study, approximately 90% indicated they could understand "very clearly" what the psychologists meant by a verbatim statement

Table 9

**School Personnel Evaluation of the Accuracy and Appropriateness
of the Findings in the Psycho-Educational Reports**

	A					B				C				D			
	Can you understand what the psychologist means by this statement?					Does this statement provide you with new information about the student?				Based on your experience with this student, is this statement correct?				Was this statement useful in planning this student's educational program?			
Percent of the Findings Rated in Each Category	Very Clear %	Somewhat Clear %	Hard to Understand %	Impossible to Understand %	No Response %	New Informa- tion Provided %	Suspicion Verified %	No New Information %	No Response %	Correct %	Partly Correct %	Incorrect %	No Response %	Very Useful %	Somewhat Useful %	Not Useful %	No Response %
Chuska																	
1980 - N = 12 F = 65	83	14	3	0	0	40	46	9	5	69	25	3	3	72	15	11	2
1981 - N = 13 F = 86	80	13	5	2	0	40	50	9	1	67	15	2	15	57	27	7	9
1982 - N = 7 F = 43	91	7	2	0	0	53	42	5	0	77	23	0	0	58	23	2	16
Tohatchi																	
1980 - N = 5 F = 30	43	50	7	0	0	100	0	0	0	40	0	0	60	100	0	0	0
1981 - N = 16 F = 109	70	26	3	0	2	50	37	14	0	64	28	0	7	71	27	3	0
1982 - N = 8 F = 48	92	8	0	0	0	46	48	6	0	100	0	0	0	100	0	0	0
Greasewood																	
1980 - N = 4 F = 22	50	36	14	0	0	32	50	14	5	68	18	9	5	36	55	5	5
1981 - N = 9 F = 57	88	11	2	0	0	42	40	16	2	54	9	5	32	65	19	4	12
1982 - N = 5 F = 38	92	5	3	0	0	32	50	18	0	71	29	0	0	100	0	0	0
Totals																	
1980 - N = 21 F = 117	67	27	6	0	0	54	35	8	3	62	17	3	18	73	19	2	1
1981 - N = 38 F = 252	78	19	3	0	0	44	42	13	1	64	19	2	15	65	25	4	6
1982 - N = 20 F = 129	91	7	2	0	0	44	47	9	0	84	16	0	0	94	6	0	0

N = The number of school personnel interviewed.

F = The total number of findings that were taken verbatim from the testing reports for each school each year.

% = The percentage of the total number of findings "F" in each category each year.

in the findings section. This change in the ratings was significant (see Table 9a).

Table 9a

**The Extent School Personnel Felt They Understood
What the Psychologists Were Saying in the Reports**

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Clear	67	78	91	4.78*	244
Somewhat Clear	27	19	7	4.27*	244
Hard to Understand	6	3	2	1.59	244
Impossible to Understand	0	0	0	0	--
No Response	0	0	0	0	--

* $p < .05$

Reviewers did not favorably rate the testing report as providing new information for them. Table 9b indicates that the percentage of respondents rating specific findings as providing new information decreased slightly over the course of the study. This was accompanied by a slight increase in the percentage of reviewers who felt that the findings section provided more confirmation of previous suspicions. Neither of these trends, however, were significant (see Table 9b).

Table 9b

The Extent School Personnel Felt Statements in the Reports Provided New Information About the Students

Response	1980 %	1981 %	1982 %	t 1980-82	DF
New Information Provided	54	44	44	1.57	244
Suspicion Verified	35	42	47	1.93	244
No New Information	8	13	9	.28	244
No Response	3	1	0	1.90	244

$p < .05$

Table 9c presents data concerning the accuracy of verbatim statements taken from test report findings. These data indicate that the percentage of reviewers rating the statements in the most favorable category improved significantly. In addition, the percentage of reviewers that reported findings were inaccurate decreased, along with a significant reduction in the number who did not respond.

Table 9c

The Extent School Personnel Felt the Statements in the Reports Were Accurate

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Correct	62	64	84	3.98*	244
Partially Correct	17	19	16	.21	244
Incorrect	3	2	0	1.90	244
No Response	18	15	0	5.07*	244

* $p < .05$

Verbatim findings from the testing reports were rated as significantly more useful in developing IEPs at the end of the study than at the beginning. Furthermore, in 1982, all reviewers rated the findings as being either "very useful" or "somewhat useful" (see Table 9d).

Table 9d

The Extent School Personnel Felt Statements in the Reports Were Useful in Planning the Students' Educational Programs

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful	73	65	94	4.56*	244
Somewhat Useful	19	25	6	3.11*	244
Not Useful	7	4	0	2.97*	244
No Response	1	6	0	1.09	244

*p<.05

e. The Extent School Personnel Felt That the Overall Testing Report Clearly Stated Testing Results and Was Appropriate

Table 10, page 73, presents summary information indicating the clarity and appropriateness of the psychological testing reports.

Respondents were given, and asked to read a typical testing report of a child with whom they were acquainted. They were asked to rate six questions about the report from most favorable to least favorable (clarity of the report, usefulness in determining placement, frequency of unexplained technical words or phrases, comparison of the report with other reports, how well the report addressed the referral question, and how adequately the examiner took into consideration culture and social factors).

Table 10

Evaluation by School Personnel of the Clarity and Appropriateness
of the Overall Psycho-Educational Testing Reports

	Chuska			Tohatchi			Greasewood			Total		
	1980 N = 12 %	1981 N = 13 %	1982 N = 7 %	1980 N = 5 %	1981 N = 16 %	1982 N = 8 %	1980 N = 4 %	1981 N = 9 %	1982 N = 5 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %
A. How clearly did this report state this student's testing results?												
Very Clear, I Understood Everything	83	92	86	60	63	88	25	88	80	67	82	85
Moderately Clear, There Were Very Few Things I Couldn't Understand	16	8	14	40	31	12	75	11	20	33	18	15
Moderately Unclear, There Were Several Points I Couldn't Understand	0	0	0	0	0	0	0	0	0	0	0	0
Not At All Clear, There Were Many Points I Couldn't Understand	0	0	0	0	0	0	0	0	0	0	0	0
No Response	0	0	0	0	0	0	0	0	0	0	0	0
B. Was this report useful in determining this student's placement?												
Very Useful	58	46	57	80	43	88	25	44	80	57	45	75
Somewhat Useful	42	46	43	2	56	12	75	55	20	43	53	25
Not Useful	0	8	0	0	0	0	0	0	0	0	3	0
No Response	0	0	0	0	0	0	0	0	0	0	0	0
C. How often did you find technical words or phrases which were not adequately explained?												
Little Jargon Was Used	58	62	57	80	38	75	100	67	60	71	53	65
Some Jargon Was Used, But the Report Was Usually Understandable	33	31	43	20	50	12	0	33	40	24	39	30
Substantial Jargon Used, Hard to Understand	0	0	0	0	6	12	0	0	0	0	3	5
Frequent Use of Jargon, Extremely Difficult to Understand	8	0	0	0	0	0	0	0	0	5	0	0
No Response	0	8	0	0	6	0	0	0	0	0	5	0

Table 10 (continued)

	Chuska			Tohatchi			Greasewood			Total		
	1980 N = 12 %	1981 N = 13 %	1982 N = 7 %	1980 N = 5 %	1981 N = 16 %	1982 N = 8 %	1980 N = 4 %	1981 N = 9 %	1982 N = 5 %	1980 N = 21 %	1981 N = 38 %	1982 N = 20 %
D. How does this report compare with other reports you have seen in the past year?												
About the Same	16	54	43	0	50	88	100	66	100	29	55	75
Worse Than the Others	0	0	0	0	0	0	0	0	0	0	0	0
Better Than the Others	75	39	57	100	50	12	0	11	0	67	37	25
No Response	8	8	0	0	0	0	0	22	0	5	8	0
E. Do these recommendations address the questions raised by the referring teacher?												
Referral Question Well Addressed	83	70	86	80	88	100	25	0	80	71	79	90
Referral Question Partly Addressed	16	8	14	20	6	0	75	11	20	29	8	10
Referral Question Not Addressed	0	0	0	0	0	0	0	11	0	0	3	0
No Response	0	23	0	0	6	0	0	0	0	0	11	0
F. Do you feel that the examiner gave appropriate considerations to societal and cultural factors in this student's case?												
Completely Appropriate Consideration	42	53	57	60	50	75	2	33	60	43	47	65
Partly Appropriate Consideration	42	30	43	40	43	25	75	66	40	48	45	35
Partly Inappropriate Consideration	16	15	0	0	6	0	0	0	0	10	8	0
Completely Inappropriate Consideration	0	0	0	0	0	0	0	0	0	0	0	0
No Response	0	0	0	0	0	0	0	0	0	0	0	0

As table 10a indicates, although respondents felt that the clarity of the testing reports improved during the course of the study, this increase was not statistically significant.

Table 10a
The Extent School Personnel Felt the Reports
Clearly Stated the Students' Testing Results

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Clear, I Understood Everything	67	82	85	1.38	39
Moderately Clear, There Were Very Few Things I Couldn't Understand	33	18	15	1.38	39
Moderately Unclear, There Were Several Points I Couldn't Understand	0	0	0	0	--
No Response	0	0	0	0	--

$p < .05$

Table 10b reports the rating of school personnel on the overall usefulness of the reports in determining the students' placement. As in the previous question, there was an increase in the percentage of reviewers who rated the overall usefulness of reports in the most favorable category, but the change that occurred between 1980 and 1982 was not significant.

Table 10b

The Extent School Personnel Felt the Reports
Were Useful in Determining Students' Placement

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Very Useful	57	45	75	1.24	39
Somewhat Useful	43	52	25	1.48	39
Not Useful	0	3	0	0	--
No Response	0	0	0	0	--

$p < .05$

School personnel often complain about jargon and technical words used in testing reports that are not adequately explained (Rucker, 1967_b and Shively & Smith, 1969). Table 10c presents data determining the extent school personnel felt the reports contained such jargon. It indicates that little jargon was used, and what was used, was easy to understand. Over the course of the study, it appears that reviewers felt there was a slight increase in the amount of jargon used, but that such jargon and technical words were easier to understand, due to explanations in the report. This change, however, was not statistically significant.

Table 10c

The Extent School Personnel Found Technical Words
or Phrases in the Reports Difficult to Understand

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Little Jargon Was Used	71	53	65	.41	39
Some Jargon, But Generally Understandable	24	39	30	.43	39
Substantial Jargon Used, Hard to Understand	0	3	5	1.03	39
Frequent Use of Jargon, Extremely Difficult to Understand	5	0	0	1.05	39
No Response	0	5	0	0	--

$p < .05$

One approach for evaluating testing reports is to compare them with other reports that school personnel have used in the past. Table 10d presents the results of this comparison.

When interpreting the data of Table 10c, it should be noted that the 1980 reviewers compared testing reports that were part of this study with reports prepared by individuals not associated with the Exceptional Child Center; thus, this second group of reports contained a different testing format and different procedures used for test administration. In 1981 and 1982, the reports being evaluated were compared with the previous year's reports which were a part of this study.

Table 10d shows that in 1980, 67% of the reviewers felt that the testing reports prepared by ECC psychologists were better than the reports prepared by individuals not associated with the ECC, 28% felt

that they were about the same, and no one felt that they were not as good as other reports they had used.

The 1981 testing reports were compared with those from 1980 and followed the same general format of the 1980 comparison. The percentage of reviewers who felt that the 1981 reports were better than the reports of the previous year dropped to 37%, and 57% felt that they were about the same. The 1982 data suggest that only 25% of the reviewers felt that the 1982 testing reports were better than those provided in 1981, and 75% felt that they were about the same. Although the change reported between 1980 and 1982 is significant, it is the change that occurred between 1981 and 1982 that is of particular importance to this study. This change, although positive, was not significant.

Table 10d

The Extent School Personnel Felt the Reports Compared With Other Reports Seen in the Previous Year

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Better Than Others	67	37	25	2.98*	39
About the Same	28	55	75	3.41*	39
Worse Than Others	0	0	0	0	--
No Response	5	8	0	1.05	39

*p<.05

Another complaint of school personnel of psychological testing reports is that they do not address the question asked by the person referring the child (Rucker, 1967a). Table 10e presents data which

addressed the question of how adequately reviewers felt that the testing reports responded to the referral questions.

In 1980, 71% of the reviewers rated the reports as addressing the referral question very well (in the most favorable category), and in 1982, 90% rated the reports in the most favorable category. Although this finding was positive and encouraging, the change reported was not statistically significant.

Table 10e

**The Extent School Personnel Felt the Recommendations
in the Reports Addressed the Referral Question**

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Referral Question Well Addressed	71	78	90	1.59	39
Referral Question Partly Addressed	29	8	10	1.59	39
Referral Question Not Addressed	0	3	0	0	--
No Response	0	11	0	0	--

$p < .05$

School personnel, particularly those working with minority students, are often critical of psychologists and skeptical of testing reports that do not give adequate consideration to social and cultural factors unique to the minority population with which they are working (Oakland, 1977). This type of criticism often results in school personnel dismissing testing results as being bias.

Table 10f provides data concerning the reviewers opinions of the extent the psychologists considered the social and cultural factors

unique to the children being evaluated. In 1980, 43% of the reviewers indicated that they felt the examiner had completely and very appropriately considered cultural and social factors. In 1982, 65% of the reviewers rated the reports in the most favorable category. This change suggests that the intervention during the study caused psychologists to give greater consideration to social and cultural factors unique to the children being evaluated; however, the percentage of change was not statistically significant.

Table 10f

The Extent School Personnel Felt the Psychologists Gave Appropriate Consideration to Social and Cultural Factors

Response	1980 %	1981 %	1982 %	t 1980-82	DF
Completely Appropriate Consideration	43	47	65	1.45	39
Partly Appropriate Consideration	47	45	35	.79	39
Partly Inappropriate Consideration	0	8	0	0	--
Completely Inappropriate Consideration	10	0	0	1.53	39
No Response	0	0	0	0	--

$p < .05$

3. There Will Be a Greater Relationship Between the Instructional Program Proposed in the IEP and the Recommendations in the Psycho-Educational Testing Reports

One major assumption of this study was that if the information contained in the psycho-educational testing reports is relevant, useful, accurate, and realistic, such information will indeed be used by school personnel. However, even though an educator, parent, or any test result

user evaluates a testing report as helpful, accurate, and relevant, such a rating does not provide evidence that they are indeed using these results (Ownby and Wallbrown, 1983). Goldman points out that testing results may be used at different levels (Goldman, 1981). Fifield (1982) believes that if individual testing results are utilized only for general orientation purposes, confirmation of professional judgements, or to satisfy curiosity, the investment in time and other resources is not warranted.

The need for individual testing is often justified on the basis that it is necessary and valuable in making placement and programming decisions in preparing the students' individual educational programs (IEPs) (Kabler, 1977). Some studies have proven that testing reports are used extensively in developing IEPs for students placed in special education (Fifield, 1982; Kabler, 1977). In certain instances, the results and recommendations sections of the testing reports provide a major source of data for the students' IEPs. In other instances, it has been observed that the IEP committee ignores individual test findings and recommendations. The IEP, regardless, provides a document of placement and program recommendations which can be compared with the findings and recommendations on individual psycho-educational testing reports. For this study, the degree of concurrence between findings and recommendations on IEPs and testing reports served as an index of the degree school personnel used testing reports and the purpose for which they were used.

Data to compare the findings and recommendations contained on IEPs and testing reports were obtained by examining the findings and recommendations contained on a sample of student IEPs and testing reports. The degree of congruence was then determined between the two sets of data.

These data were collected for each observation period of the study. The student population from which to draw the samples consisted of all the students placed in special education in the target schools.

Reason for Referral. A preliminary step before comparing the relationship between IEPs and testing reports was an analysis of the findings and recommendations contained in the psychological testing reports for the students placed in special education of the target schools. The data presented on Table 11, page 83, indicated changes in the reasons children were referred for testing during the course of the study. For the 1980 testing, behavioral and health problems accounted for a very small percentage of the referrals, but for the 1981 testing, behavioral and health problems accounted for 24% of the referrals. In 1982, behavioral and/or health problems did not singly account for any referrals; however, behavioral problems combined with academic problems accounted for 27% of the referrals.

Clarity of Referral Question. The need for a clear and precise referral question was a problem for this study. If the person making the referral does not know what information is needed or wanted, it is difficult for them to appropriately critique a testing report and determine if the report provides information that is helpful. For this reason, the referral question was stressed in the inservice training. For 1980, Table 11 indicates that 56% of the referral questions were judged as good, and 41% as fair. The percentage of good referral questions increased in 1981 to 67%, and those referral questions judged as fair decreased to 26%. The 1982 data, however, indicate that referral questions were judged less favorably at the conclusion of the study than they were at the beginning.

Table 11

Referral and Placement Information From the Testing
Reports of Students Placed in Special Education

Item	Totals		
	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %
1. REASON FOR REFERRAL			
A. Academic Problem	93	79	70
B. Behavioral Problem	6	17	0
C. Health Problem	0	7	0
D. Academic and Behavioral Problem	*	*	27
E. Other	0	0	3
2. CLARITY OF THE REFERRAL QUESTION			
A. Poor, Vague and Unclear Question	2	7	12
B. Fair, Adequately Stated Question	41	26	42
C. Good, Well Stated Question	56	67	42
D. No Referral Question	2	0	3
3. RECOMMENDATION FOR PLACEMENT			
A. Learning Disability	98	76	85
B. Mental Retardation	1	14	9
C. Emotionally Disturbed	0	3	3
D. Other	0	5	3
4. PLACEMENT CLASSIFICATION			
A. Self-Contained	1	10	3
B. Resource Room	78	45	73
C. Small Group	0	33	18
D. One-to-One	0	12	3
E. Other	*	*	3

*This data not reported for 1980 and 1981.

Interpretation of this data suggests that the inservice training had little effect on how well referral questions were stated. Poor, vague, and unclear referral questions slightly increased over the course of the study. However, the director of special education and other school personnel attributed this increase to the difficulty of getting referral forms and the logistics process of preparing and submitting referrals rather than the effectiveness of the inservice training.

Recommendation for Placement. Of the children in the three target schools placed in special education, approximately 86% were classified as learning disabled. This high percentage of children classified as learning disabled can be explained. As noted in the literature, most psychologists and IEP committee members are sensitive to the issues of bias in testing, inappropriate placement, labeling, and other practices which may discriminate. The special education classification of learning disability is felt to contain the least amount of stigma. When psychologists and IEP committee members had misgivings concerning a classification because there was not clear or consistent evidence of which handicapping category was most appropriate, yet there was apparent evidence that the child needed individualized help, this dilemma was resolved by selecting learning disabilities as the classification of choice. In a similar matter, to comply with regulations that require children to be placed in the least restrictive environment, very few students were recommended for self-contained placement. The majority of students were recommended for placement in a resource room, and a significant number of children were recommended for small group type instruction.

The relationship between the recommendations contained in the students' IEPs and their testing reports was determined by using Pearson Product Moment Coefficient of Correlation. In addition, the specificity of recommendations, i.e., no recommendation, general/broad, or detailed and specific recommendations, was factored in the correlation coefficient and a percentage comparison was made between the recommendations contained on the testing reports and the IEPs.

Relationship Between Short-Term Recommendations on Testing Reports and IEPs. Table 12, page 86, presents the relationship between short-term recommendations contained in the testing reports and those contained on the IEPs. Ten categories of short-term recommendations were identified and recorded on the IEPs and the testing reports. The percentage of each recommendation for each category, along with its specificity rating is presented on Table 12. In addition, the correlation coefficient between the IEPs and the testing reports is presented on Table 12.

The correlation coefficient between short-term goal recommendations on IEPs and testing reports indicates that the relationship improved between 1980 and 1982. The average change was .18. However, not all categories of short-term recommendations improved. The categories showing the most significant increase include: math concepts +.50, language and auditory skills +.22, functional math +.28, reading comprehension +.24, social skills +.38, and visual motor skills +.28. The learning skills also showed an increase, but not at a significant level. The relationship between IEP and testing report recommendations in reading mechanics -.03, math combinations -.13, and other recommendations -.10 was less in 1982 than in 1980. None of the reductions in

Table 12

Relationship Between Short-Term Recommendations Contained on the Testing Report and the IEP

Item	No Recommendation Provided			General, Broad Recommendation Provided			Detailed or Specific Recommendation Provided			r Between Test Report and IEP			Change in r Between 1980 and 1982
	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	
1. READING MECHANICS Test Report	10	14	49	25	12	3	65	74	49	.45	.37	.42	-.3
IEP	17	7	39	47	7	9	36	86	52				
2. READING COMPREHENSION Test Report	43	45	15	18	12	21	39	43	64	.39	.65	.63	+.25
IEP	59	48	33	30	19	0	11	33	67				
3. MATH COMBINATIONS Test Report	20	19	15	23	7	6	55	74	79	.35	.22	.22	-.13
IEP	31	33	85	41	2	9	26	64	6				
4. FUNCTIONAL MATH Test Report	84	98	70	8	2	0	6	0	30	.35	.00	.63	+.28
IEP	89	100	79	7	0	0	2	0	21				
5. MATH CONCEPTS Test Report	79	95	33	4	5	3	15	0	64	.18	.00	.68	+.50
IEP	69	100	46	17	0	9	12	0	46				
6. LANGUAGE AND AUDITORY SKILLS Test Report	45	33	30	21	21	15	32	45	55	.04	.00	.26	+.22
IEP	20	45	24	46	10	9	32	45	67				
7. SOCIAL SKILLS Test Report	75	71	58	12	12	9	11	17	33	.21	.31	.59	+.38
IEP	88	95	70	6	5	6	4	0	24				
8. LEARNING SKILLS--ATTENDING, ETC. Test Report	81	74	82	9	12	3	8	14	15	.01	.30	.17	+.16
IEP	88	93	88	4	5	0	6	2	12				
9. VISUAL-MOTOR SKILLS Test Report	86	64	84	5	21	9	7	14	6	.16	.24	.44	+.28
IEP	86	95	91	6	2	6	6	2	3				
10. OTHER RECOMMENDATIONS Test Report	91	86	70	5	5	0	4	10	30	.13	.41	.03	-.10
IEP	74	87	82	15	7	0	9	7	18				

coefficient of .19 is significant at the .05 level. The average change for short-term recommendations was .18.

relationship were significant, however, the sections showing improved relationship were significant.

The data presented on Table 12 suggest that the intervention through inservice training and/or changes in the psychological testing report format and process did improve the relationship between the recommendations for short-term goals contained on the testing reports and those contained in IEPs.

Relationship Between Recommendations for Long-Term Instructional Goals Contained on Student Testing Reports and Their IEPs. Table 13, page 88, presents the relationship between recommendations for long-term instructional goals contained in the testing reports and those on the IEPs. As indicated in 1980, the IEPs did not report long-term goals; thus, no relationship could be recorded. Furthermore, the percent of psychological testing reports that contained long-term goals in 1981 and 1982 increased and recommendations became more specific.

The opposite occurred with student IEPs; in 1980, there were no IEPs that contained long-term goals, yet in 1981, 88% of the IEPs contained long-term goals for reading instruction. This was reduced, however, to 19% in 1982. In 1981, 71% of the IEPs contained recommendations for math instruction, but in 1982, only 21% contained such recommendations. In the other four categories of long-term goals, fewer IEPs reported such goals and those goals reported tended to be very general.

During the course of the study, inservice training activities focused on improving short-term goals in IEPs. The impact of this emphasis is supported by the data presented in Table 13. The relationship between the long-term instructional goals on the IEP and those in the testing report could only be reported for 1981 and 1982 data. The average change was +.3 and was negligible.

Table 13

**Relationship Between Recommendations for Long-Term Instruction
Goals Contained on the Testing Report and the IEP**

Item	No Recommendation Provided			General, Broad Recommendation Provided			Detailed or Specific Recommendation Provided			r Between Test Report and IEP			Change in r Between 1981 and 1982
	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	
1. LONG-TERM READING INSTRUCTION													
Test Report	10	5	9	73	86	58	15	10	33	.00*	.14	.21	+.7
IEP	0	12	79	0	83	18	0	5	3				
2. LONG-TERM MATH INSTRUCTION													
Test Report	19	24	3	72	69	46	7	7	52	.00*	.20	.07	-.13
IEP	0	29	79	0	64	12	0	7	9				
3. LONG-TERM GOALS IN LANGUAGE DEVELOPMENT													
Test Report	45	27	39	42	74	24	11	5	36	.00*	.13	.31	+.18
IEP	0	59	85	0	41	9	0	5	6				
4. LONG-TERM GOALS IN SOCIAL SKILLS													
Test Report	34	43	55	32	57	18	12	0	27.3	.00*	.30	.18	-.17
IEP	0	81	91	0	19	6	0	0	3				
5. LONG-TERM GOALS IN VISUAL-MOTOR DEVELOPMENT													
Test Report	89	83	91	7	17	9	2	0	0	.00*	.07	.00	-.7
IEP	0	98	100	0	2	0	0	0	0				
6. LONG-TERM GOALS IN SCIENCE, SOCIAL STUDIES, AND OTHER CONTENT AREAS													
Test Report	77	83	61	15	12	9	6	5	30	.00*	.11	.26	+.15
IEP	0	93	94	0	2	3	0	5	3				

* This data was not reported in the IEPs for 1980.

The average change in r for long-term instructional goals was +.3.

Relationship Between Recommendations for Specific Materials and Strategies, Supplemental Services, and Criteria for Evaluating Effectiveness on the Testing Reports and the IEPs. The last three areas on the testing reports and IEPs that requested specific recommendations included: (a) specific materials and instruction, (b) supplemental services, and (c) the criteria for evaluating the effectiveness of the program. These data are presented in Table 14, page 90. The 1980 IEPs did not report recommendations for these three categories, and in 1981 less than 20% of the IEPs reported recommendations for these categories. This improved in 1982 with 58% of the IEPs reporting recommendations for specific instructional materials, 39% reporting recommendations for supplemental services, and 12% providing evaluation criteria for the program's effectiveness.

During the course of the study, the number of testing reports that contained recommendations for these three areas increased, as well as the specificity of such recommendations; however, the relationship between these recommendations and those on the IEP decreased. As with long-term goals, the focus of the IEP inservice training offered by the agency focused on short-term goals and comparatively little attention was given to recommendations in the above areas; thus reflecting the focus, the correlations shifted from positive to negative between 1981 and 1982 with an average change of $-.49$. This relationship change was significant but not meaningful, in view of the facts as described above.

The data collectors recording and evaluating the specificity of recommendations in student IEPs and testing reports provided a rating of agreement between the testing reports and IEPs. As presented on Table 15, the degree of improvement in the relationship of findings on testing

Table 14

Relationship Between Recommendations for Specific Material or Instructional Strategies, Supplemental Services, and Criteria for Evaluating Effectiveness Contained on the Testing Report and the IEP

Item	No Recommendation Provided			General, Broad Recommendation Provided			Detailed or Specific Recommendation Provided			r Between Test Report and IEP			Change in r Between 1981 and 1982
	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	
1. RECOMMENDATION OF SPECIFIC MATERIALS AND INSTRUCTIONAL STRATEGIES													
Test Report	25	14	18	10	10	9	63	76	73	.00*	.10	-.19	-.29
IEP	0	86	42	0	12	39	0	2	18				
2. RECOMMENDATION FOR SUPPLEMENTAL SERVICES													
Test Report	43	26	15	2	74	12	53	0	73	.00*	.11	-.32	-.43
IEP	0	91	61	0	5	9	5	0	30				
3. CRITERIA FOR EVALUATING EFFECTIVENESS													
Test Report	22	5	0	8	95	24	68	0	76	.00*	.70	-.04	-.74
IEP	0	98	82	0	2	15	0	0	3				

* This data was not reported in the IEPs for 1980.

The average change for material and strategies, supplemental services, and criteria was -.49.

Table 15

**Overall Rating of How Well the Testing Reports Agreed
With the IEPs and the Quality of the Reports**

Item	Poor			Fair			Good			Direct Agreement		
	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %	1980 N = 98 %	1981 N = 42 %	1982 N = 33 %
1. Overall Rating of How Well the Testing Reports Agreed With the IEPs	30	26	12	44	41	49	23	31	24	*	*	15
2. Rating of Overall Quality of Testing Report	4	4	0	40	41	12	53	52	88			

* This data not reported for 1980 and 1981.

reports and IEPs was small. The evaluators felt that approximately 24% of the reports had good agreement with the IEPs and nearly half had fair agreement.

In analyzing the 1982 data, instances were identified in which it was apparent that the testing report was used almost exclusively to develop the IEP. A new category (direct agreement) was added to the data and the frequency of direct agreement between testing reports and IEPs was recorded for 1982. This direct agreement occurred in approximately 15% of the reports reviewed in 1982.

Data collectors were also asked to provide a rating of the overall quality of the testing reports. These data are presented in Table 15 and indicate that data collectors felt there was a significant improvement in the quality of the testing reports over the course of the study.

4. At the Completion of the Project, Referral Forms, Testing Reports, and Other Procedures Used to Communicate Individual Test Findings and Recommendations Will Have Been Improved

The data collected to address the above objective included verbal and written comments from interviews with target school personnel along with the Test Report Critique Form which contained both forced choice and open-ended comments. The Test Report Critique Form asked reviewers to evaluate the referral and report forms and other activities used in the agency to communicate test findings to users (see Appendix C). These examples and comments were used to stimulate further inquiries during the interview.

The nature of the interview focused on criticisms and suggestions from school personnel for improving the psycho-educational assessment process and the testing reports. The only solicited opportunity for respondents to provide positive comments was to the question, "How did

the testing report compare with other testing reports?" Individual comments were tabulated and the percentage of criticisms, recommendations, neutral responses and positive responses were calculated. These data are found on Table 16, page 94.

The 1980 data indicate that 62% of the comments were critical of psychological testing. The percentage of critical comments of psychological testing reduced during the study, but not significantly. In 1980, criticisms focused primarily on the availability of reports, turnaround time (from referral to report), and the nature of the referral. In 1981, criticisms focused primarily on the validity of the findings and cultural considerations. In 1982, most criticisms addressed the availability of reports, cultural considerations, and the reality of recommendations.

The recommendations in 1980 focused on the format of reports, specificity of the recommendations, the assessment process, and issues concerning communicating testing results with staff. In 1981, most recommendations addressed the issue of increased specificity of the findings and recommendations in the report, and techniques for improving culture consideration in the assessment of children. In 1982, the recommendations focused on the validity of the findings, turnaround time, the assessment process and a variety of other comments.

Seventy-two percent of the complimentary comments in 1980 concerned the quality of the reports. Other areas complimented included the specificity of recommendations and the consideration psychologists gave to cultural factors. In 1981, only 19% of the comments about the quality of the reports were complimentary. Culture consideration and validity of findings received 19% and 14% of the compliments respectively. In 1982, 22% of the complimentary comments concerned the use of

Table 16

Summary of Written and Verbal Comments of School
Personnel Concerning Psychological Assessment

Category of Written and/or Verbal Comments	1980				1981				1982				Totals			
	Criticism N=93 %	Recommendation N=39 %	Compliment N=18 %	Nonevaluative Statement N=0 %	Criticism N=98 %	Recommendation N=50 %	Compliment N=37 %	Nonevaluative Statement N=23 %	Criticism N=33 %	Recommendation N=17 %	Compliment N=9 %	Nonevaluative Statement N=5 %	Criticism N=224 %	Recommendation N=106 %	Compliment N=64 %	Nonevaluative Statement N=28 %
Referral	13	5	0	*	4	10	3	4	0	0	0	20	7	7	2	7
Communications--Staffing	2	13	5	*	4	0	0	0	0	0	0	0	3	5	2	0
Turnaround (Referral to Report)	18	0	0	*	7	6	0	0	3	12	0	0	11	5	0	0
Availability of Reports	20	3	0	*	10	2	3	0	12	0	0	0	15	2	2	0
Format of Reports	10	21	0	*	1	2	5	0	0	0	11	0	4	8	5	0
Specificity	8	18	11	*	9	24	0	0	12	6	0	0	9	19	3	0
Test Appropriateness	3	3	0	*	1	0	0	0	0	0	0	0	2	1	0	0
Culture Consideration	5	8	11	*	14	28	19	0	15	6	11	0	11	17	16	0
Validity of Findings	8	8	0	*	20	6	14	0	9	18	22	0	14	8	11	0
Reality of Recommendations	4	3	0	*	6	6	3	0	12	6	11	0	6	5	3	0
Technical Data and Jargon	3	3	0	*	7	2	14	0	9	6	11	0	6	3	9	0
Assessment Process	3	15	0	*	6	6	11	0	6	12	0	20	5	10	6	4
Quality of Reports	0	0	72	*	1	0	19	0	6	0	11	0	1	0	33	0
Need More Training About Testing	*	*	*	*	0	4	0	4	0	6	0	0	0	3	0	4
More Familiarity Needed With Students	*	*	*	*	0	0	0	26	0	0	0	0	0	0	0	21
Other Comments	2	3	0	*	2	4	3	65	3	24	0	60	2	7	2	64
Use of Results	*	*	*	*	5	0	8	0	12	6	22	0	4	1	8	0
Totals (1980 N=150) (1981 N=203) (1982 N=64)	62	26	12	*	48	24	18	11	51	26	15	7	53	25	15	6

the testing results and additionally 22% concerned the validity of the findings.

Across the three years of the project, over half of the comments were critical of psychological assessment, 25% were recommendations for improvement, 15% were complimentary and only 6% were nonevaluative statements. The categories of written and/or verbal comments addressed most frequently by reviewers concerned: (a) culture considerations in which 11% criticized the reports, 17% provided recommendations for improvement, and 16% were complimentary of the attention given to cultural factors, (b) the findings in which 14% were critical of the findings section, 8% provided a recommendation for improvement, and 11% were complimentary of the findings section, and (c) quality of the reports in which 33% were complimentary and only 1% was critical of the quality of the reports.

The data presented in Table 16 and the analysis of the verbal and written comments suggest that as the study proceeded, the staff reviewing the reports focused on particular elements of each category and issue. In 1980, nearly all of the complimentary comments addressed the quality of the reports. In 1981 and 1982, when the quality of the reports was being compared with the earlier reports of this project, the complimentary comments covered a variety of categories and were more specific. In 1980, most of the comments were general in nature, but in 1981 and 1982, reviewer comments identified technicalities and specific items in the reports to comment on.

The data contained in the Summary Tables 6, page 51, 7, page 59, 8, page 65, and 9, page 69, all suggest positive trends in the "ability of the testing report" to communicate test findings and recommendations

more effectively to users. Table 4 suggests that the extent testing reports were used increased during the course of the study and significantly more school personnel indicated they received needed testing information from reports rather than from consultants. In addition, Table 5 indicates that testing reports were not only used more frequently, but for more sophisticated purposes, i.e., to identify recommendations and/or determine the nature and cause of learning problems.

The referral form on which school personnel referred children for testing was the same all three years of the study. The inservice training provided by the agency focused on explaining the use of the referral forms, procedures for determining short-term goals, and exercises in preparing good referral questions.

Frequent criticisms of the referral process stressed: (a) the referral form was too long and too complicated, (b) there was too much delay between the time the child was referred and tests were administered, and (c) that children had to be referred by school personnel early in the school year. (This criticism concerned the date for determining the number of children eligible for special education.)

Notes were kept of informal comments, suggestions, and recommendations throughout the course of the study and then tallied with the comments that comprise Table 16. These data suggest the following conclusions concerning the communication between psychologists and school personnel.

1. School personnel would prefer to have Navajo school psychologists who they felt would be more familiar and considerate of important cultural and language factors.

2. The forms from which students were referred were too long, complicated, and the process of referring students moved too slowly.
3. There was insufficient time allowed for school personnel to consult with the psychologists.
4. Testing reports should be more readily available to school personnel.

The most complimentary comments, both formal and informal, provided by school personnel about the assessment process included the following:

1. The psychologists were competent and took time to obtain information from the school personnel.
2. The testing reports were comprehensive and complete with findings and recommendations that were appropriate.
3. The reports were well written and individualized, whereas a computer prepared report would have stock statements used throughout.
4. The staffings at the conclusion of testing were very positive and one of the best parts of the entire testing process.
5. The opportunity was appreciated to give opinions and provide recommendations on improving the individual psychological assessment process.

DISCUSSION AND RECOMMENDATIONS

It was the purpose of this study to improve the usefulness and relevance of individual psycho-educational assessment in making placement and program decisions for Native American children. The study focused on three BIA boarding schools of the Fort Defiance Agency on the Navajo Reservation. Consequently, there are many organizational, physical, and historical variables unique to this setting and agency, thus to generalize the findings and recommendations to other BIA schools or public schools in general, has some risks. Nonetheless, the findings of the study and the experience gained through conducting the study appear to have application to other BIA schools and public schools in general. This section will identify some of the factors, organizationally, programmatically, and/or culturally unique to the setting in which the study was conducted, discuss the findings with regard to these variables, and provide recommendations for which action can be taken.

During the course of the study, a variety of changes occurred in the agency, personnel, policy and dynamics. Some of the changes that occurred are reflected in the data, but others were masked by statistical procedures.

To interpret the findings and determine recommendations that will improve the relevance and usefulness of testing data, the changes that occurred during the course of the study along with factors that could not be changed to accommodate the study must be identified and discussed:

1. Dependent Variables

Only a limited amount of restructuring of various dependent variables was possible. The educational programs in the schools from which data were collected needed to remain intact, thus certain activities of the study, i.e., scheduling for testing, inservice training, changes

in testing format, and the referral forms had to be arranged or maintained in a manner that would not violate the normal activities in the schools of educating children.

2. Personnel Changes

During the study, there were many changes in district personnel. The staff turnover rate, similar to other BIA boarding schools, was approximately 40% of the faculty. This influenced the results of the study, for not all staff had participated in the inservice training. Staff turnover also resulted in certain changes in educational philosophies and practices throughout the district and in the individual target schools.

3. P. L. 94-142 Regulations and BIA Guidelines

Department of Education and BIA regulations and guidelines for the implementation of Public Law 94-142 were not finalized or promulgated before or during the study. As a result, there were variations in the interpretation regarding certain provisions such as timeframes, parental consent, parent participation, and confidentiality by different schools and individuals. Provisions of Public Law 94-142 were not violated, on the contrary, the tendency was towards a very strict and narrow interpretation of such provisions. In certain cases, this interpretation seemed to interfere with the intent of the "Education for All Handicapped Children Act" by impeding the identification, placement, and provision of services to handicapped children. Furthermore, such interpretations were not always consistent for as personnel changed, inservice training was conducted, and consultation was provided, certain changes were detected in the practices and interpretation of Public law 94-142 in the individual schools.

4. Court Day

The BIA Education Office changed the "count day" (the date eligibility for children in special education was determined for which additional funds were provided through the U.S. Department of Education). This necessitated a change in scheduling students for assessment and IEP meetings. It also shortened the turnaround time from when a child could be referred to the time the testing reports had to be returned and IEP committees scheduled. To accommodate these changes, additional individual testing was scheduled in the spring and different times throughout the year. Throughout the study, efforts were taken to keep these variables consistent; however, the students in the Fort Defiance Agency are very mobile, and student transfers to and from the target schools were considerably greater than is generally experienced in elementary schools. The changes in the "count day" and students transferring from one school to another resulted in an undetermined amount of contamination.

5. Program Expansion

During the study period, between 1980 and 1982, the agency experienced growth in the number of programs and services provided to handicapped children. Additional resource teachers were hired, additional self-contained units were established, and more psychologists and speech pathologists were employed. This expansion in services and personnel is evidenced in the data collected to determine the impact of the study. As additional options for placement services became available, these options were more frequently recommended by psychologists and IEP committee members. Furthermore, the data collected suggest that school personnel in the target schools showed a positive change in: (a) their

understanding of psychological and special educational services, (b) their role and function as team members on the IEP committees, and (c) the role of the regular teacher in providing special education services to children. Some of these changes could be interpreted as normal growth in sophistication and improvement in the agency, others were apparently stimulated by the activities of the study.

Project Objectives and Suggestions

In this section, the findings and conclusions for each project objective will be discussed along with suggestions for appropriate changes.

Objective 1 - Strengths and Weaknesses in the Psycho-Educational Assessment Process of the Fort Defiance Agency

The data collected to address project Objective 1 indicated three significant weaknesses in the psycho-educational assessment process: appropriate utilization of contract psychological testing services, the referral process, and accessibility of testing reports.

1. Utilization of Contract Psychological Testing Services

The Fort Defiance School Agency, like many other BIA Agencies, has experienced difficulty in recruiting and maintaining professional personnel such as special education teachers, and support staff including psychologists, speech therapists, physical therapists, and occupational therapists. Contributing to this difficulty is the geographic remoteness of the area, lack of available housing, as well as cultural and environmental factors which are different and unfamiliar to most professionally trained people in these speciality areas. To obtain the professional services normally provided by specialty trained personnel, BIA agencies are sometimes forced to send children to off-reservation schools or institutions

in metropolitan areas. Another option includes entering into consortium agreements for speech therapists, occupational therapists, physical therapists, and psychological services which are then provided on a share-timed basis with other agencies. To obtain needed psychological assessment, BIA agencies have often entered into contracts with psychological service agencies. Contract psychologists generally travel to the schools on the reservation on a prearranged date, test the children referred, and return the completed psychological testing reports so they can be used in making placement and program decisions by IEP committees. This procedure is, at best, a stop gap measure, for many of the other services such as consultation, inservice training, evaluation, and direct intervention that would normally be provided by resident school psychologists cannot be provided through the typical testing service contract. Although it is less expensive to contract for testing services than to employ resident psychologists, such economic advantages must be compared with the need and availability of other psychological services which can only be provided by resident psychologists. Comments recorded on the Test Critique Forms and provided in interviews with school staff pointed out that each year different groups of psychologists have been awarded the contracts to provide student assessment services. Each group uses different instruments, report formats, scheduling, and assessment procedures.

To maximize the use of contract psychological testing services, two approaches are suggested:

a. Selecting and Monitoring Contract Psychological Test Services

In reviewing past student assessment contracts, it was found that the selection of the contractors is often made without input from the school personnel who are to use the testing reports. Most often, the selection decision was made by business people in the area office; they determined who was selected on the basis of proposed costs and a license as evidence of proficiency. Selection based on cost encourages bidders to provide the minimum of services. They may administer the tests as rapidly as possible, utilizing an assembly line approach which limits the interaction between psychologists and school personnel. In their efforts to reduce cost, they may also use computer generated reports which may not reflect the individual strengths and weaknesses of the student, individualized recommendations, or the reality of resources available on the reservation. If testing reports are to be relevant and useful, cost must be balanced with the amount of interaction a contractor has with school personnel, and the psychologist must be familiar with local resources and provide individualized reports. To ensure that these provisions are provided, the contractor should be monitored and their process evaluated.

The criterion of requiring a current state license to practice psychology is not an appropriate requirement because most state licensed psychologists are not necessarily prepared to offer school psychological assessment services. The appropriate requirement should be a valid school psychologist certificate which ensures that the contract psychologist has completed appropriate course work and training in school

psychology. Furthermore, to improve psychological services to Native American children, greater opportunities need to be provided for psychologists in training to obtain such experience under close supervision.

b. Utilizing an Established Testing Report Format

The data in this study indicate the value of utilizing an established testing report format (see Table 10, page 73).

Furthermore, the report format needs to be updated, changed, and evaluated periodically to ensure that its content and length are reflecting information that is useful and relevant to the test report user (Rucker, 1967; Shively & Smith, 1969).

2. The Referral Process

The process used to refer students for psychological testing was recognized, at the beginning and throughout the study, as a weakness. Even with inservice training, it appeared that the forms and the procedures were, in the view of school personnel, too complicated to facilitate referring children in a timely and appropriate manner.

It is recommended that additional research and development be undertaken on the referral forms to reduce and eliminate unnecessary or duplicated information. It is suggested that the referral information be placed in packets with clear instructions to assist in identification, screening, and referring children for psychological testing (Christenson et al., 1982).

3. Accessibility of Testing Reports and Confidentiality

Concern for confidentiality of testing reports appeared to be taken to an extreme in some of the schools. As a result, school

personnel felt they were discouraged from checking out or using testing data. The need for confidentiality is tantamount to the sensitivity of the material labeled as confidential. Properly prepared psycho-educational testing data does not need to be extremely confidential. Indeed, to be usable, primary emphasis should be on recommendations for intervention rather than on sensitive descriptive and causative factors.

The testing report format used in this study was designed to focus on recommendations and the reports were written, edited, and supervised with a full understanding that they would be presented to and discussed openly with parents.

It is recommended that testing reports be made more available to school personnel, that they be shared with parents, and that school psychologists prepare reports that are designed for such general use.

Objective 2 - Provision For Inservice Training of School Personnel and ECC Psychologists

The evaluation data of the workshops and seminars provided as part of this study focused on the opinions of participants. No systematic attempts were made to measure knowledge or skills acquisition of participants. Changes that occurred during this study occurred for a variety of reasons. One may have been the inservice training. Data evaluating the workshops, along with the informal comments and discussions with participants, emphasized that school personnel feel that they are "overly inservice trained". School personnel expressed concern that supervisors and administrators participated very little and that many other school personnel who needed the inservice training found

excuses to not attend the workshops. School personnel, particularly teachers, resented inservice training being imposed from the administration without their participation in the topics selected, schedule, and method of presentation. Evaluation data indicate that participants valued the simulated exercises, demonstrations, and small group participatory discussions much more than video-tapes and lectures.

A variety of logistical problems were experienced in coordinating the school personnel workshops; these interfered with the smooth, well-organized task directed workshops that had been planned. In order to control cost, participant comforts such as air conditioned facilities, comfortable chairs, and coffee were eliminated. As one participant indicated, the school personnel workshops were conducted "on the cheap".

When awarding contracts for future inservice training on the reservation, it is suggested that cost containment not be the controlling factor. Provisions should be made for the workshops to expand the opportunity for participants to interact informally with presenters, and that comfort, freedom from distractability and small group or individual activities be expanded.

Objective 3 - Determining the Impact of Intervention and Training Provided by the Study

Data to determine the impact of intervention and training provided by the study was collected at the beginning, at midpoint, and at the conclusion of the project. These data indicate that a number of changes did occur reflecting the impact of the study. Some of these changes were determined to be statistically significant, and others, although not significant, clearly indicate a positive trend. The data suggest

that the testing reports were rated more useful and relevant when an abstract of the report was added at the beginning along with summary sections. The ratings also improved when the psychologists expanded on the recommendations and made them more specific.

One major limitation contracting psychologists must overcome is their unfamiliarity with existing services. They seldom have sufficient contact with the district to become acquainted with the available resources, the strengths and weaknesses of different programs and personnel, the instructional materials utilized, and the philosophy of instruction that exists. Each day following testing, a staffing of the children tested was held to discuss test findings and recommendations. During the staffings, the psychologists made notes on the comments of school personnel about services and materials that were available. This information was shared with other psychologists in debriefing sessions and then summarized and discussed in the seminars. This increased awareness of the available resources and how they were valued reflected in the recommendations section of future testing reports. The more favorable evaluations of the usefulness and relevance of the 1982 recommendations section of the reports suggest that this had a positive impact.

The impact of the inservice training provided to school personnel was positive in some aspects, but not in others. Even though information and skills in preparing better referrals were stressed in both workshops, the referrals at the end of the study were judged as less adequate than they were at the beginning. However, there was a trend that suggested school personnel were using testing reports more frequently and for more sophisticated purposes. Furthermore, at the end

of the study, 15% of the IEPs were judged to contain recommendations transferred almost directly from the testing report. The use of testing reports to assist in placement and programming decision was a major emphasis of the two workshops.

The opportunity to dialogue with the psychologists and the data collectors was highly valued by school personnel for they often expressed their appreciation for the chance to express their opinions and provide recommendations concerning psychological assessment. During the sessions in which reviewers critiqued the testing reports, they had the opportunity to "walk through" the various sections of the reports. This appeared to be a meaningful learning experience. Informal comments suggested that reviewers liked evaluating specific verbatim items from the reports. During these critiquing sessions, it was noted that the reviewers increased in their sophistication as the study proceeded for the individual comments on the Test Report Critique Form indicated a tendency for reviewers to be more critically demanding of the testing reports.

It was observed when analyzing the test report critique data, reviewers tended to develop a negative impression of the reports when specific items of information were not included. When psychologists did not state the rationale for a test selected, what the test was meant to provide, did not comment on background information or developmental history, or explain efforts to consider cultural and language differences to avoid bias, this suggested to the reviewer that they were not adequately addressed. Such explanations were needed to insure the test report user that the psychologist was cognizant of such factors and that they were not forgotten or disregarded.

The only systematic complaint of school personnel about the testing reports was their length. This complaint presented a dilemma, for on one hand the reviewers were asking for increased specificity in the recommendations section, more background information and explanation, yet on the other hand they were critical of the increased length that occurred as a result of the increased specificity. The changes in the test report format made during the study did indeed lengthen the testing reports. Efforts were made to counterbalance this by eliminating the wordiness of reports, duplicative information and material, and utilizing more summary sections (see Resource Manual, pages 373 through 379).

The length of the testing reports was, to a large extent, determined by the individual writing styles of the psychologists. The seminars addressed report writing and editing skills in an effort to reduce the length.

The study indicates that the results section and the recommendations section have the greatest application to school personnel. Test report readers generally referred to the abstract, the summary of the results, diagnostic statement, and recommendations. Future attention needs to be directed at the placement and focus of these sections to increase their effectiveness in reporting information and data. Methods of highlighting these sections and reordering them should also be considered. Concomitantly, additional investigation is needed to determine which sections could be eliminated to make the report shorter. Possibly the long-term objectives, the criteria of success, and suggested materials could be reduced and incorporated into other sections.

Recommendations

In the following section, recommendations derived from the data and experience of conducting this study are presented. The recommendations and discussion that follow are presented for the purpose of improving the usefulness and instructional relevance of psycho-educational assessment. The following recommendations are designed primarily for the Fort Defiance Agency but have application as well to other BIA boarding schools as well as public education in general.

1. It is recommended that the process and forms by which students are referred for psychological testing be examined and reevaluated to ensure that they contain provisions whereby the referral question can be clearly identified enabling the psychologists to respond to the information needs of the referer.

The data in this study suggest that the information teachers receive from psychological testing reports is consistent in specificity to the information they request. A vaguely or poorly stated reason for referring a student for testing results in a testing report that contains equally vague and unspecific recommendations. This relationship seems analogous to referring an automobile to a mechanic and asking for a complete "mechanical". With such a referral, not only is the mechanic likely to overlook the very problem necessitating the repair, but may also spend an inordinate amount of time determining what the user wants. Likewise, a psychological test referral that requests "a complete psychological" or "needs testing" does not identify a starting point permitting the psychologists to formulate assumptions about cause or possible recommendations that can be validated with convergent testing data. When confronted with vague referral questions, the psychologists generally turn to using a standard battery of individual tests that probes in many areas without sufficient depth to obtain the information

of most value to the teacher. When the referral information is specific, descriptive, and contains a clear statement of what the teacher wants to know and/or suggests what might be wrong, the psychologist is better able to provide meaningful data which is either new information or confirms or refutes the teacher's suspicions (Mussman, 1964).

Referral forms and procedures are often established with little attempt to systematically evaluate them. The tendency is to include all of the background information which might be useful rather than just the information necessary. To collect or respond to all the information requested, the teacher must devote a great deal of time and effort. This complicates and lengthens the form without improving its usefulness. As a result, teachers either do not refer children that should be referred or they find ways to avoid completing the entire referral form. Often the referral question, the presenting problem, or the specific information the teacher wants to know, is obscured by background and peripheral information.

This study suggests that inservice training alone is not sufficient to improve the referral process. Teaching school personnel to identify good and clear referral questions, exercises in completing and writing referral questions, completing referral forms, and walking through instructions on forms may provide negligible if not negative results.

Additional research is needed to analyze referral methods and processes. Such research must address the design and evaluation of referral instruments and identify the procedures that will maximize the effectiveness while also minimizing the amount of time and effort needed to process the referrals.

2. To control cultural and language bias in psychological assessment, it is recommended that the procedures of converging data, obtaining second opinions, and synthesizing reports be emphasized.

Few issues in education have engendered more debate than bias in testing. There are numerous books and articles which discuss the pros and cons of the issues. Although the final chapter concerning bias in testing has not been written, a number of factors are suggested by the literature (Jensen, 1981; Duffey et al., 1981; Rosenbach & Mowder, 1981):

- a. The primary purpose of standardized tests is to reduce or eliminate, to the extent possible, subjectivity, or "bias", in decision making. The issue that caused education to use standardized tests is the same issue for which standardized tests are currently under attack (Reschly, 1983; Kaufman, 1983; Hynd, 1983).
- b. Efforts to produce culture-free or culture-fair instruments have not been particularly satisfactory. For the most part, these instruments have fared little better than other standardized tests (Duffey et al., 1981).
- c. Techniques, such as criterion-referenced tests or behavior checklists have advantages, but they also have problems of sample selection and representation. Furthermore, when scrutinized for reliability and validity, they fare little better than currently used standardized tests (Duffey et al., 1981; Bailey & Harbin, 1980).
- d. Although unbiased instruments can and have been developed, they lack predictive validity; thus, they are not useful in predicting change and recommending intervention (Bailey & Harbin, 1980).

- e. Although there are some promising ideas for the future, at the present time, there are few acceptable substitute for using standardized tests (Clarizio, 1979; Linden, Linden, & Bodine, 1974).

The above data suggest a measurement dilemma similar to the dilemma found by medicine in controlling the spread of infection. Even though some very powerful and effective disinfectants have been developed, their usefulness is limited for they often destroy the very thing that they are designed to protect. The fact that disinfectants do not control the spread of infection to everyone's satisfaction does not constitute grounds for banning their use. Furthermore, while research continues for disinfectants that are more effective and selective, at the same time, procedural steps and safeguards have been initiated in most hospitals to monitor and control the spread of infection.

Procedural safeguards in the student evaluation provisions of Public Law 94-142 provide some broad procedures designed to minimize both subjective opinion and bias in student assessment.

It was not the purpose of this study to evaluate the bias in the testing; however, the opinions of test report reviewers and other school personnel suggest that the procedural steps initiated and followed to control bias and ensure cultural fairness were favorably reviewed.

Experimental research is needed to determine if such procedures do in fact control bias in testing or simply give such an illusion to the users. In the absence of such data, it is recommended that the procedural steps followed in the dispositional assessment model, such as the one employed for this study, be adapted and utilized. These procedures include obtaining a second professional opinion on the diagnostic statements, test report findings, and recommendations;

selecting instruments that are as free from language and culture bias as possible; and testing causative and treatment hypotheses or assumptions through convergent measurement data (Mowder, 1983).

3. It is recommended that a "standard" testing report format be designed based on the information needs of test result users and provisions of Public Law 94-142.

The single most important variable, which test report reviewers felt enhanced the use and relevance of the testing reports more than any other, was the development and use of the Psychological Testing Report Format (see Appendix C). The properties of the report format that reviewers evaluated as most helpful included: the flexibility it provided which encouraged the individualization of findings and recommendations, a format which ensured that the psychologists did address the specific information needs of the test report users and the provisions of Public Law 94-142.

This study, however, as recommended by reviewers, suggests that the testing reports could be shorter. School personnel did not use all of the information in the reports. Techniques to highlight specific information, such as the diagnostic statement and recommendations, should be investigated. However, it is recommended that the report should continue to report orientation and background information, including a description of the testing instruments and why they were selected, along with efforts to consider cultural factors.

Future contractors that will provide psychological testing services on the reservation should use the established Psychological Testing Report Format or an adaptation thereof.

4. It is recommended that Navajos fluent in their language and familiar with their culture be trained and certified as psychologists. Until competent Navajo psychologists are available, the following are recommended:
(a) Anglo school psychologists in training need to be given greater opportunities to work with Native American children under appropriate supervision, and (b) Navajo interpreters must be carefully trained if they are to assist during psychological assessment.

The data supporting recommendation No. 4 was derived from observations and interviews conducted as part of the project. However, changes in the evaluation of testing reports suggests that the intervention initiated during the project address the concerns of school personnel interviewed.

Many of the problems of recruiting and encouraging psychologists to stay on the reservation could be addressed by training Navajos to provide psychological and assessment services to their own people. However, off-reservation training programs at university campuses have only been marginally successful. In such training programs, a large percentage of the Navajos at the completion of their training do not return to the reservation. Thus, it is suggested that training should be provided, at least part time, on the reservation itself. On-reservation training could include course work, practicum experience, and internships. It is essential, however, that reservation training maintain high standards of performance and close supervision.

It is recognized that training and employing Navajo psychologists is a long ranged solution. As an interim, the following are recommended:

- a. The relevance and usefulness of testing services provided by off-reservation psychologists was clearly enhanced by knowledge of certain cultural and language factors. However, the only way off-reservation school psychologists can become sensitized and trained to appropriately consider cultural factors in their assessment efforts

is to have the opportunity to work on the reservation under supervision. Current contracting practices requiring a license or school psychologist certificate curtails such arrangements. It is recommended that agencies on the reservation promote contracts with training programs that encourage the use of psychologists in training to provide services on the reservation for practicum and internship experience.

- b. Psychological assessment of bilingual and/or non-English fluent children presents problems that are difficult to resolve. As a preliminary step, when necessary and to the extent possible, non-language dependent tests should be used. The majority of the children referred in this project demonstrated English language deficiencies severe enough to necessitate using one or a combination of unbiased non-language dependent tests. However, utilizing non-language dependent tests introduces problems of predictive validity, reliability, diagnostic properties, and the usability of the data generated. Furthermore, non-language dependent tests are not effective in diagnosing academic skills, psycho-motor skills, or as a measure of social and emotional adjustment. To obtain measures in these areas, Navajo aides were available to interpret for the examiner. For the 1980 testing, Navajo teacher aides were used following an orientation and introductory discussion that instructed them on how to appropriately interpret without adding or subtracting information. For the 1981 testing, 13 Navajo students who were enrolled in a school psychology training program at Utah State University and spoke their native language fluently were utilized. These Navajo school psychology candidates were first used as

interpreters, then to interview for background data, and finally to administer selected tests. During 1981 and 1982, interpreting directions and questions, and interviewing children during testing was systematically improved. This improvement was recognized by school personnel, administrators, ECC psychologists, and data collectors. From this experience and information, there was strong consensus that interpreters cannot just be picked up because they have bilingual skills. If they are to contribute, they must be appropriately trained. Teacher aides and dorm personnel brought in on an incidental basis to interpret, in all probability, violate standardized testing assumptions, thus destroying validity and reliability.

Two other important factors relating to the use of interpreters and Navajo testers were suggested that deserve consideration:

First, it was observed that rapport with children was clearly affected by using interpreters during testing. Children were often more shy and sometimes intimidated by the presence of another adult fluent in their native language. Many of the normal rapport building techniques that psychologists use such as "patter", "animation", and verbal reinforcers became stilted and ineffective in the presence of a Navajo interpreter. Thus, the desired testing atmosphere of challenges, expectations, acceptance, and "gaming" was difficult to establish and maintain.

Second, it was observed throughout the study that in most cases, it was easier for Anglo psychologists to establish and maintain a positive task orientated rapport with the child than it was for the Navajo testers. When interviewing or testing children, the Navajo school

psychology candidates took longer, and had to work harder to establish and maintain rapport, motivation and ontask expectations than did the Anglo psychologists. When the Navajo school psychology candidates did establish optimal rapport, it was most often when they were using English rather than Navajo. Therefore, the assumption that fluency in the language facilitates rapport and ontask behavior, motivation, etc. was not verified in this study.

Three factors were identified which may account for these phenomena.

- a. The level of training and experience in psychological assessment was significantly higher for the Anglo psychologists than for the Navajo school psychology candidates. Furthermore, it was observed that, as the Navajo school psychology candidates gained experience, their skill in establishing and maintaining rapport and motivation with students improved.
- b. School personnel pointed out that Navajo students expect classroom instruction, directions, and discussions to be conducted in English. As a result, they may respond to English instruction in a more task orientated manner than when instructions were presented in Navajo.
- c. It was suggested that cultural and social factors, how Navajos interact traditionally with each other in terms of dominance, expectation, and self disclosure may also account for the behavior described above.

These observations and hypotheses need further investigation for which additional research is suggested.

5. It is recommended that future psycho-educational testing contracts include the following: (a) an established testing report format, (b) staffings and increased systematic interaction between testers and school personnel, (c) orientation and training for the psychologists, and (d) evaluation of the psychologist's performance and procedures utilized by the assessment report users.

Recognizing that employing additional resident psychologists, especially Navajo psychologists, is a long-term solution, it will be necessary to continue contracting off the reservation for psychological testing services. To enhance off-reservation assessment contractual services, the following are recommended:

- a. Utilizing an established testing report format. On page 103, the need for a standardized testing report format is discussed. The testing report format used in this study appears to be adequate, but additional evaluation data are needed on methods of improving this outline format. It is recommended that a semi-standardized outline format be required in future contracts and efforts be undertaken to systematically improve its usefulness and instructional relevance in placement and program development decisions.
- b. Staffings of children tested and systematic interaction between school personnel and diagnosticians. Throughout the study, it was apparent that school personnel wanted increased opportunities to discuss behavioral and instructional problems, recommendations, and placement decisions with the diagnostic personnel. Future contracts should specify increased time for such interaction and dialogue between testing personnel and school personnel in both the collecting of assessment data and in discussing placement and program decisions.
- c. Orientation training for contract psychologists. This study suggests that the relevance of psychological testing reports and the usefulness of the placement and program recommendations can be enhanced

when the psychologists are familiar with the services, instructional materials available, and the instructional philosophy of the school. It is recommended that future contracts for psychological testing services make provisions to orientate the psychologists under contract with the services that are available in the agency, the instructional materials that are currently in use, policies and procedures followed, and the instructional philosophy of the agency. A short orientation period, perhaps a half-day, is recommended as a provision of future contracts.

- d. To improve the relevance and usefulness of the individual assessment, each dimension of the testing process should be systematically evaluated. Administrators or committees often make decisions

concerning the content and procedures of making referrals, test report format and the assessment procedures. The recommendations and decisions of such committees, however, need systematic evaluation if they are to be improved. It is recommended that forms and procedures be subjected to periodic review and evaluation and appropriate changes be initiated based on evaluation data.

In addition, a systematic evaluation plan should be established to evaluate future psychological assessment contracts. This plan should include an evaluation of the quality of the reports, their usefulness and accuracy. It should evaluate the procedures followed and the competence and helpfulness of the psychologists contracted.

6. It is recommended that the instructional program in the Fort Defiance Agency be reexamined to determine if sufficient emphasis is being placed on instruction and drill and practice to ensure mastery of basic skills in reading and math for all children.

Virtually every child referred for individual testing, regardless of age, demonstrated deficits in: (a) basic reading skills of word and

letter recognition, phonics and word attack skills, and (b) basic math skills in addition and subtraction, combinations, counting and grouping as well as carrying and borrowing. Instructional deficits of this nature are generally caused by one or a combination of factors including:

- a. An instructional program that provides insufficient emphasis on basic skills mastery. Such programs may progress too rapidly through the basic skills. They may not be appropriately sequenced or provide for sufficient drill and practice to enable the less capable students to master the skills before going to other things.
- b. Lack of mastery also occurs when there is insufficient monitoring of student progress. This permits students to "slide" by until they experience severe academic difficulties.

It is recommended that the curriculum be reexamined along with instructional materials, methods, and monitoring provisions to determine if appropriate priority is being assigned to the mastery of basic skills by students.

APPENDICES

151

122

Appendix A

Bibliography of References Cited

Bibliography of Tests and Instructional Programs

BIBLIOGRAPHY

- Algozzine, B., Ysseldyke, J., & Hill, C. Psychoeducational decision making as a function of the amount of information reviewed. Psychology in the Schools, 1982, 19(3).
- Arena, J. How to write an IEP. Novato, Calif.: Academic Therapy Publications, 1978.
- Bailey, B., & Harbin, G. Nondiscriminatory evaluation. Exceptional Children, 1980, 46(8), 590-596.
- Campbell, D. T., & Stanley, J. C. Experimental and quasi-experimental design for research. Chicago: Rand-McNally College Press, 1963.
- Christenson, S., Ysseldyke, J., & Algozzine, B. Institutional constraints and external pressures influencing referral decisions. Psychology in the Schools, 1982, 19(3).
- Clarizio, H. In defense of the IQ test. School Psychology Digest, 1979, 8(1), 79-88.
- Cole, J. K., & Magnussen, M. Where the action is. Journal of Consulting Psychology, 1966, 30(6), 539-543.
- Duffey, J., Salvia, J., Tucker, J., & Ysseldyke, J. Unbiased assessment: A need for operationalism. Exceptional Children, 1981, 47(6), 427-434.
- Fifield, M. B. Evaluation of the perceived usefulness and effectiveness of psycho-educational testing reports at Intermountain Intertribal School. Unpublished thesis, Utah State University, 1982.
- Fifield, M. G. A study to determine the feasibility of establishing a UAF satellite center on the Navajo reservation. Proposal submitted to the Administration on Developmental Disabilities, Navajo Community College, Tsaile, Arizona, 1978.
- Fifield, M. G., & White, K. R. Final report: Identification of handicapped Native Americans living on reservations in Utah and the barriers and constraints which prevent service delivery. Salt Lake City, Utah: Utah State Office of Education Grant #SE-78-B-01, 1980.
- Fischer, C. T. Undercutting the scientist-professional dichotomy: The reflective psychologist. Clinical Psychologist, 1976, 29.
- Gearheart, B. R., & Wallenberg, E. B. Application of pupil assessment information. Denver: Love Publishing Company, 1980.
- Goldman, L. Using tests in counseling. New York: Appleton-Century-Crofts, 1961.
- Goslin, D. A. The search for ability. New York: Russell Sage Foundation, 1963.

Greenberger, S. M. Sequential testing and educational programming (STEP).
Novato, Calif.: Academic Therapy Publications, 1977.

Grimes, J. Shaping the future of school psychology. School Psychology Review, 1981, 10(2).

Grubb, R. D. Shaping the future of school psychology: A reaction. School Psychology Review, 1981, 10(2).

Havighurst, R. J. Indian education: Accomplishments of the past decade. Phi Delta Kappan, 1981, 62(5), 329-331.

Hynd, G. W. The school psychologist: An introduction. New York: Syracuse University Press, 1983.

Jensen, A. R. Bias in mental testing. New York: The Free Press, 1980.

Jensen, A. R. Straight talk about mental tests. New York: The Free Press, 1981.

Kabler, M. Public law 94-142 and school psychology challenges and opportunities. School Psychology Digest, 1977, 6(1), 19-30.

Kaufman, A. Intelligence: Old concepts-new perspectives. In J. Hynd (Ed.), The school psychologists: An introduction. New York: Syracuse University Press, 1983.

Linden, K., Linden, W., & Bodine, R. L. Tests bias: Fuss n' facts. Measurement and Evaluation in Guidance, 1974, 7(3), 1963-1968.

Ludwig, M. A. et al. BCP's behavioral characteristics progression organized as the STEP system sequential tasks for educational planning instructional manual and index. Karon Valley Union School District, Department of Special Education, 1978.

McLoughlin, J. A., & Lewis, R. B. Assessing special students. Columbus, Ohio: Charles E. Merrill, 1981.

Mowder, B. Assessment and intervention in school psychological services. In J. Hynd (Ed.), The school psychologist: An introduction. New York: Syracuse University Press, 1983.

Mussman, M. C. Teachers' evaluations of psychological reports. Journal of School Psychology, 1964, 3(1), 35-37.

Okland, T. (Ed.). Psychological and educational assessment of minority children. New York: Brunner/Mazel, 1977.

Public Law 94-142 (Education for All Handicapped Children Act of 1975).

Reschly, D. Legal issues in psycho-educational assessment. In J. Hynd (Ed.), The school psychologist: An introduction. New York: Syracuse University Press, 1983.

Rosenbach, J. H., & Mowder, B. Test bias: The other side of the coin. Psychology in the Schools, 1981, 18(40).

Rucker, C. N. Report writing in school psychology: A critical investigation. Journal of School Psychology, 1967, 5(2), 101-108.

Rucker, C. N. Technical language in the school psychologist's report. Psychology in the Schools, 1967, 4(2), 146-150.

Salvia, J., & Ysseldyke, J. E. Assessment in special and remedial education (2nd ed.). Boston: Houghton Mifflin, 1981.

Sattler, J. M. Assessment of children's intelligence and special abilities (2nd ed.). Boston: Allyn and Bacon Inc., 1982.

Shively, J. J., & Smith, A. F. Understanding the psychological report. Psychology in the Schools, 1969, 6(3), 272-273.

Ysseldyke, J. E., & Weinberg, R. A. The future of psychology in the schools: Proceedings of the Springhill symposium. School Psychology Review, 1981, 10(2).

BIBLIOGRAPHY OF TESTS
AND
INSTRUCTIONAL PROGRAMS

Ability Tests

- Burgemeister, B. B., Blum, L. H., & Lorge, I. Columbia Mental Maturity Scale (3rd Ed.). New York: Harcourt Brace Javanovich, 1972.
- Hiskey, M. S. Hiskey-Nebraska Test of Learning Aptitude--Revised. Lincoln, Nebraska: Union College Press, 1966.
- Leiter, R. G. Leiter International Performance Scale. Chicago: Stoelting Co., 1948.
- Raven, J. C. Progressive Matrices. London: Lewis, 1938.
- Raven, J. C. Coloured Progressive Matrices. London: Lewis, 1947.
- Wechsler, D. Wechsler Intelligence Scale For Children--Revised. New York: Psychological Corporation, 1974.

Achievement Tests

- Brigance, A. H. Brigance Diagnostic Inventory of Early Development. Woburn, Mass.: Curriculum Associates, Inc., 1978.
- Brigance, A. H. Brigance Diagnostic Inventory of Basic Skills. Woburn, Mass.: Curriculum Associates, Inc., 1976, 77 2nd Ed. 4th Printing.
- Connolly, A. J., Nachtman, W., & Pritchette, E. M. The Keymath Diagnostic Arithmetic Test. Circle Pines, Minn.: American Guidance Service, 1971.
- Dunn, L. M., & Markwardt, F. C., Jr. Peabody Individual Achievement Test. Circle Pines, Minn.: American Guidance Service, 1970.
- Hofmeister, A. Diagnostic Arithmetic Combinations Test. Department of Special Education, Utah State University.
- Jastak, J. F., & Jastak, S. The Wide Range Achievement Test (Rev. Ed.). Wilmington, Del.: Jastak Associates, 1978.
- Woodcock, R. W. Woodcock Reading Mastery Tests. Circle Pines, Minn.: American Guidance Service, 1973.
- Woodcock, R. W., & Johnson, M. B. Woodcock-Johnson Psycho-Educational Battery. Boston: Teaching Resources, 1977.

Language Tests

- Ammons, R. B., & Ammos, C. H. The Quick Test. Psychological Test Specialists, 1962.
- Dunn, L. M., & Dunn, L. M. Peabody Picture Vocabulary Test--Revised. Circle Pines, Minn.: American Guidance Service, 1981.
- Wepman, J. M. The Auditory Discrimination Test. Chicago: Language Research, 1973.

Psycho-Motor Tests

- Berry, K. E. Developmental Test of Visual-Motor Integration. Chicago: Follett Educational Corporation, 1967.
- Bender, L. Bender Visual-Motor Gestalt Test. American Orthopsychiatric Association Research Monograph, 1938, No. 3.
- Harris, D. B. Goodenough-Harris Drawing Test (Draw-A-Man). New York: Harcourt, Brace & World, 1963.

Social and Adaptive Behavior Tests

- Teacher Rating Scale for the Survey of Children With Exceptional Educational Needs, Grades K-8. Division of Special Education, Arizona State Department of Education.
- Lambert, N. M., Windmiller, M., Cole, L., & Figueroa, R. A. AAMD Adaptive Behavior Scale--Public School Version. American Association on Mental Deficiency, 1975.
- Burks, H. F. Burks' Behavior Rating Scales. Los Angeles, Calif.: Western Psychological Services Publishers and Distributors, 1977.
- Walker, H. M. Walker Problem Behavior Identification Checklist--Revised. Los Angeles, Calif.: Western Psychological Services Publishers and Distributors, 1976.

Instructional Programs

- Greenberger, S. M. Sequential Testing and Educational Programming (STEP). Noyato, Calif.: Academic Therapy Publications, 1977.
- Sequential Tasks for Educational Planning: Behavior Characteristics Programming (Vol. I and Vol. II). Cajon Valley, Calif.: Union School District, Department of Special Education, 1977.

Appendix B

Procedural Phases, Tasks, and Steps of the Study

ASSESSMENT RESEARCH STUDY
Fort Defiance Agency

Procedural Phases, Tasks, and Steps
1 January 1982

I. Phase One--Assessment of the Utilization and Educational Relevance of Psycho-Educational Assessment Reports in the Fort Defiance Agency

Pre-Project Activities

Task A--Collection of Baseline Data

- Step 1--Identification of the primary users of the 1980-81 individual psycho-educational testing reports in the Fort Defiance Agency.
- Step 2--Identification of the level and/or the extent the 1980-81 psycho-educational testing reports are used in the Fort Defiance schools.
- Step 3--Identification of the types of information on the 1980-81 reports which the teaching staff felt to be most useful.
- Step 4--Identification of the information on the 1980-81 testing reports which was seen by teachers and other school staff as being least useful.
- Step 5--Determination of the relationship between the recommendations and findings in the 1980-81 psycho-educational reports and the recommendations contained from the students' IEPs.
- Step 6--Determination of how valid the teaching staff at the Fort Defiance Agency feels that the recommendations and findings on the 1980-81 testing reports are. This will be undertaken by comparison and calculations of the perceptions of the teaching staff in reviewing testing reports.
- Step 7--Collection of information on the 1980-81 psychological reports from the teachers at the Fort Defiance Agency as to how the report can be improved in wording, format, presentation, length, etc.
- Step 8--Analysis of the above data.
- Step 9--Submission of the progress report, Phase One, Task A (June, 1981).

Task B--Development of In-Service Training Workshops for (a) Fort Defiance Staff, and (b) School Psychologists Selected to Provide Psycho-Educational Testing in September, 1981 to the Fort Defiance Agency. (These workshops will be supported by an in-service training and testing contract awarded by the Fort Defiance Agency. These workshops and above activities are not part of the Assessment Research Project budget. The workshop's content among other things, however, will address an orientation for the Fort Defiance staff and school psychologists of the project to ensure consistency and understanding of the procedures and so forth when the project begins in September, 1981.)

- Step 1--Develop objectives, procedures, manuals, etc. for in-service training at Fort Defiance Agency.

- Step 2--Conduct Fort Defiance in-service training.
- Step 3--Develop objectives, procedures, manuals, etc. for in-service training of psychologists.
- Step 4--Conduct a training workshop for the psychologists.
- Step 5--Prepare an evaluation report of the in-service training at the Fort Defiance Agency (Fall, 1981).

Commencement of the Assessment Research Grant Proposal As
Approved by U.S. Department of Education, Office
of Special Education Rehabilitation Services

September 3, 1981

Task C--Start Up Activities for the Assessment Research Study

- Step 1--Appropriate revisions of time-frames and tasks.
- Step 2--Employment of staff.
- Step 3--Revision of the Psycho-Educational Assessment Format.
- Step 4--Monitoring test administration.
- Step 5--Preparation of the report and evaluation of psycho-educational assessment.

Task D--Assessment of the Utilization and Educational Relevance of Psycho-Educational Assessment Reports for the Fort Defiance Agency (1981-82 Academic Year).

- Step 1--Identification of the primary users of the 1981-82 individual psychological testing reports in the Fort Defiance Agency.
- Step 2--Identification of the level and/or extent of the 1981-82 psycho-educational testing reports were used by the Fort Defiance Agency staff.
- Step 3--Identification of the types of information on the 1981-82 psycho-educational reports which the Fort Defiance staff felt was most useful.
- Step 4--Identification of the information on the 1981-82 testing reports which teachers and other school staff at the Fort Defiance Agency felt was least useful.
- Step 5--Determination of the relationship between the recommendations and findings on the 1981-82 psycho-educational reports and the recommendations contained on the student's IEP.

Step 6--Determination of how valid the teachers and staff feel that the recommendations and findings of the 1981-82 testing reports are. This will be determined by the sample of the teaching staff reviewing the reports and correlating it with other data.

Step 7--Collection of information from the 1981-82 testing reports as to how to improve the reports in terms of format, wording, presentation, length, clarity, etc.

Step 8--Analysis of the above data.

Step 9--Preparation of Progress Report, Phase One, Task D.

II. Phase Two--Development of Inservice Training Programs to Improve the Utilization and Educational Relevance of Psycho-Educational Assessment

Analysis and examination of previous data collected, including Progress Reports

Task A--Inservice Training for Fort Defiance Staff

Step 1--Develop objectives, procedures, materials, etc. for in-service training of Fort Defiance Agency staff.

Step 2--Preparation of training manual.

Step 3--Review of training materials and procedures by content specialists at the ECC and content specialists from Fort Defiance.

Step 4--Preparation of in-service training evaluation materials.

Step 5--Analysis of workshop evaluation and preparation of evaluation report.

Task B--In-Service Workshop for Psychologists Assigned to Provide Individual Testing, Fort Defiance Agency, August, 1982

Step 1--Design objectives, procedures, and materials for the workshop.

Step 2--Review by content specialists at the ECC of objectives and materials for the workshop.

Step 3--Evaluation workshop

Task C--Administration of Psycho-Educational Testing, Fall, 1982 Participating Schools Following Revised Procedures and Revised Format

III. Phase Three--Evaluation of Project Impact

Task A--Determine Project Impact

Step 1--Identification of the primary users of the 1982 individual psycho-educational testing reports in the Fort Defiance Agency.

- Step 2--Identification of the level and/or the extent the 1982 psycho-educational testing reports are used in the Fort Defiance schools.
- Step 3--Identification of the types of information on the 1982 reports which the teaching staff felt to be most useful.
- Step 4--Identification of the information on the 1982 testing reports which was seen by teachers and other school staff as being least useful.
- Step 5--Determination of the relationship between the recommendations and findings in the 1982 psycho-educational reports and the recommendations contained from the students' IEPs.
- Step 6--Determination of how valid the teaching staff at the Fort Defiance Agency feels that the recommendations and findings on the 1982 testing reports are. This will be undertaken by comparison and calculations of the perceptions of the teaching staff in reviewing testing reports.
- Step 7--Collection of information on the 1982 psychological reports from the teachers at the Fort Defiance Agency as to how the report can be improved in wording, format, presentation, length, etc.
- Step 8--Analysis of the above data.
- Step 9--Submission of the progress report, Phase One, Task A (June, 1982).

Task B--Analysis of Data Collected

Task C--Preparation for Submission of Final Report

IV. Dissemination of Findings

Appendix C

Example of the Psycho-Educational
Testing Report Critique Form

BEST COPY AVAILABLE

Psychoeducational Testing Report Critique Form

INSTRUCTIONS: Please review the attached psychoeducational testing report for a student with whom you worked last year and complete this critique form by placing a check (✓) on the line next to the statement that is closest to your opinion.

Student: _____

School: _____

How clearly did this report state this student's testing results?

- _____ Very clear, I understood everything.
 _____ Moderately clear, there were very few things I couldn't understand.
 _____ Moderately unclear, there were several points I couldn't understand.
 _____ Not at all clear, there were many points I couldn't understand.

Please note some examples of things which were unclear to you for the interviews:

Was this report useful in determining this student's placement?

- _____ Very Useful
 _____ Somewhat useful
 _____ Not useful

How often did you find technical words or phrases which were not adequately explained?

- _____ The frequent use of jargon made the report extremely difficult to understand.
 _____ There was substantial jargon used which made the report hard to understand.
 _____ Some jargon was used, but the report was usually understandable.
 _____ Little jargon was used.

Please note the phrases or jargon you found confusing for the interview (if you prefer, go through the report and circle them in red):

How does this report compare with other reports you have seen in the past year?

- _____ About the same.
 _____ Worse than the others.
 _____ Better than the others

Comments:

Do these recommendations address the questions raised by the referring teacher?

- _____ Referral question well addressed.
 _____ Referral question partly addressed.
 _____ Referral question not addressed.

Please note some specific questions which were not addressed.

Do you feel that the examiner gave appropriate consideration to social and cultural factors in this student's case?

- _____ Completely appropriate consideration
 _____ Partly appropriate consideration given.
 _____ Partly inappropriate consideration given.
 _____ Completely inappropriate consideration given.

Please note some specifics:

BEST COPY AVAILABLE

Listed below are several of the sections from this student's report along with their stated objectives.

In column A evaluate how well the section of the report met its objectives.

In column B evaluate how useful the section was in planning this student's educational program.

Place a checkmark (✓) on the line corresponding to the statement that is closest to your opinion.

A
How well did this section of the report meet these stated objectives?

B
How useful was this section in preparing this student's educational program?

VERY WELL, every objective was met.
GOOD, most of the objectives were met.
FAIR, a few of the objectives were met.
POOR, almost none of the objectives were met.

VERY USEFUL, it helped a great deal and was necessary.
SOMEWHAT USEFUL, but was not really necessary.
NOT USEFUL, and was not necessary.

REFERRAL INFORMATION

- Objectives:
1. Provide background about student (tribe, year at Intermountain, etc.)
 2. List referring teacher(s) and their concerns.
 3. List records reviewed and information obtained.
 4. List findings and recommendations of screening committee.

BACKGROUND INFORMATION

- Objectives:
1. List personal information about the student, family, tribe, health, school, special interests, etc.
 2. List the problems as the student sees them.
 3. State the student's ability to use English to communicate.

BEHAVIORAL OBSERVATIONS

- Objectives:
1. Describe how student cooperated during testing (rapport, motivation, interest, language, enjoyment, etc.)
 2. Note any specific strengths or difficulties.

PSYCHO-EDUCATIONAL FINDINGS

- Objectives:
1. Describe test, what it measures and why it is used.
 2. Report results as ranges, percentiles, and grade placements.
 3. Report personality and social factors as emotional indicators.

SUMMARY

- Objectives:
1. List student's strengths.
 2. Summarize testing findings.

RECOMMENDATIONS

- Objectives:
1. Recommend placement category.
 2. List other placement considerations.
 3. List long and short-term goals.
 4. Suggest instructional materials and strategies.
 5. Suggest support services.
 6. Suggest a means of evaluating the student's educational program.

DIAGNOSTIC STATEMENT

- Objectives:
1. Recommend most appropriate placement category for student and refer to specific guidelines or regulations.
 2. Qualify statement to include other information to be provided by the placement committee.

Based on the testing data, the psychologist has made several CONCLUSIONS. Below are some statements about the student taken directly from the psychologist's report.

Please rate each statement in the categories to the right by placing a checkmark (✓) in the box which represents your opinion.

Can you understand what the psychologist means by this statement?

Does this statement provide you with new information about the student?

Based on your experience with this student, is this statement correct?

Was this statement useful in planning this student's educational program?

Very Clear
Somewhat Clear
Hard to Understand
Impossible to Understand

The Testing Report Provided Information I Didn't Know Before

I Suspected This and the Testing Report Verified It

I Didn't Need a Testing Report to Tell Me This

Correct
Partly Correct
Incorrect

Very Useful
Somewhat Useful, but Not Really Necessary
Not Useful and Not Necessary

Alfred was given both the Peabody Picture Vocabulary Test and the Primary Language Questionnaire to assess his facility with the English language. On the PPVT, he achieved a percentile score of 4. This was an age equivalency score of 7 years, 7 months. On the Primary Language Questionnaire, which is a series of questions asking his preferences for speaking Navajo or English, he indicated that he prefers speaking English but does speak both languages.

In order to understand Alfred's ability to discriminate sounds in the English language, he was given the Hopman Auditory Discrimination Test. His score on this test indicated he had difficulty discriminating sounds in the English language.

Alfred was given the Raven Progressive Matrices to assess reasoning ability. His score placed him between the 25th and 50th percentile when compared to other children his age taking this test, i.e., within an average range of reasoning ability.

The Developmental Test of Visual-Motor Integration, a paper and pencil copying task, was utilized to assess visual perception and motor behavior. Alfred obtained an age equivalency score of 11 years 9 months.

The first subtest was reading which consisted of letter-word identification, word attack, and passage comprehension. He received a grade equivalent of 1.6 in overall reading skills. On the letter-word identification test, he could identify letters and read three-letter words. Under word attack, he could sound consonants singly, but was not certain of vowel sounds or combinations of consonants and vowels.

The mathematics score consisted of two areas, calculation and applied mathematics. He received a mathematics grade equivalent of 3.6.

His written language skills, which were assessed through a dictation section and a proofing section, placed him at a grade equivalent of 1.6.

How useful was this recommendation in developing this student's individualized education program?

Because there was no record of a vision or hearing test in Alfred's file, his poor sound discrimination, and his close proximity to test materials, it is appropriate that he receive both evaluations to determine if poor vision or hearing may be interfering with his learning ability.

Fort Defiance Assessment Research
IEP Summary Sheet

Student:
School:
Examiner:
Date Tested:

Classroom Teacher:
Resource Teacher:
Other IEP Committee:

Referral Question? Yes _____ No _____ Source: _____
Nature of Referral: Academic _____ Behavior _____ Physical _____ Other: _____
Quality of the Referral: Poor _____ Fair _____ Good _____
How well did the IEP address the referral question? Poor _____ Fair _____ Good _____

RECOMMENDATIONS AND OBJECTIVES

Placement: LD _____ MR _____ ED _____ PH _____ Other _____
Comments:

Short Term Goals:

Reading (Mechanics/Comp.):

Math (Computation/Func./Concepts):

Language (Expressive/Receptive):

Auditory Training:

Social Skills(Behavioral/Interpersonal):

Learning Skills (Attention, Attendance, Etc.):

Motor Development:

Other:

Long Term Goals:

Materials and Strategies:

Supportive Services (Speech, Medical, Etc.):

Evaluation Criteria:

OVERALL RATING: 1 - Poor 2 - Fair 3 - Good

Completeness of the Report:
Appropriateness of the Report:
Degree of Specificity:
Overall Impression:

Appendix D

**Individual Tests Used by
Psychologists and Frequencies**

171

TESTS ADMINISTERED AND FREQUENCIES

	<u>1980</u>	<u>1981</u>	<u>1982</u>
A. Ability Tests:			
1. The Coloured Progressive Matrices (Raven's Color)	36	47	108
2. The Standard Progressive Matrices (Reven's Standard)	11	41	58
3. Hiskey-Nebraska Test of Learning Aptitude (Hiskey-Nebraska)	119	20	16
4. Wechsler Intelligence Scale for Children (Revised) (WISC-R)	12	27	9
5. Leiter International Performance Test (Leiter)	33	29	68
6. The Columbia Mental Maturity Scale (CMMS)	5	18	15
B. Achievement Tests:			
1. Woodcock-Johnson Psycho-Educational Battery Part II Achievement Tests (Woodcock-Johnson)	126	86	121
2. Woodcock Reading Mastery (Woodcock Reading)	11	4	0
3. Key Math	2	3	1
4. Wide Range Achievement Test (WRAT)	33	8	0
5. Peabody Individual Achievement Test (PIAT)	0	14	10
6. Brigance Inventory of Early Development (Brigance-K) Brigance Inventory of Basic Skills (Brigance-E)	3	0	0
7. Diagnostic Arithmetic	1	1	0
C. Language Tests			
1. Peabody Picture Vocabulary Test (PPVT)	107	58	143
2. Quick Test (QT)	38	49	45
3. Wepman Auditory Discrimination Test (Wepman)	152	102	184
D. Psycho-Motor Tests:			
1. Draw-A-Person (DAP)	144	116	192
2. Developmental Test of Visual-Motor Integration (VMI)	143	118	192
3. Bender Visual-Motor Gestalt Test (BVMG)	1	0	0

E. Social and Adaptive Behavior Tests:

1. Teacher Rating Scale	170	128	201
2. AAMD Adaptive Behavior Scale	32	17	18
3. Berks Behavior Rating Scale (Berks)	6	12	28
4. Walker Behavioral Scale	4	10	26
TOTAL NUMBER TESTED	170	128	201

Appendix E

Psycho-Educational Test
Report Format

C O N F I D E N T I A L

**Interview and Draft Report Form
Revised, 1981**

Student:

Date of Evaluation:

____/____/____
year month day

Birth Date:

____/____/____
year month day

Age:

____/____/____
year month day

Grade:

School:

Examiner:

Tests Administered: (list all tests)

ABSTRACT

Reason for the Referral

Procedures Used to Examine the Child and to Minimize Bias

Findings

Recommendations

REFERRAL INFORMATION

Tribe _____ **Primary Language** _____

Secondary Language _____

Parents in Home: Mother _____ **Father** _____

Foster Placement _____ **Adoption** _____

Brothers _____ **Sisters** _____ **Family Position** _____

Pronounced Health Problems _____

Vision _____ Hearing _____

Medications _____ Hospitalizations _____

Retention _____ Transition _____

Special Help Received: Special Education _____

Remedial Reading _____ Tutorial _____

Previous Evaluations _____ (Date) _____ (Examiner) _____

Tests Administered _____

Previous Recommendations _____

Problems the Student Perceives (e.g., academic, social, etc.)

Interests (e.g., clubs, sports, etc.)

BEHAVIORAL OBSERVATIONS

Communication skills, receptivity, accessibility, rapport, motivation, persistence, distractibility, language skills, enjoyment of the tasks, shifting from one task to another, any outstanding physical features, and specific difficulties and/or strengths.

PSYCHOEDUCATIONAL FINDINGS

Start each test with a new paragraph. Include a short statement as to what the test measures and why it was used.

Language Dominance

Receptive Language (QT/PPVT - Report mental age)

Intellectual Assessment

Report as categories, bands, percentiles, range, etc. Do not report IQ scores.

Psycho-Motor Skills

(Perceptual - Motor)
(Gross Muscle)
(Small Muscle)

Reading Task Analysis

Report grade levels. Describe both comprehension and word attack/analysis skills. Strengths and weaknesses.

Math Task Analysis

Spelling Task Analysis

Socio-Emotional Findings

SUMMARY

RECOMMENDATIONS

1. Diagnostic Statement

This statement should be in the words used in the BIA regulations (see example). If student does not meet BIA guidelines for classification, so state.

2. Other Placement Considerations

E.g., small group, one-to-one, reduce reading level of material in regular classroom, any particular educational placement considerations, behavior modifications, vocational programming.

For students not qualified for special education, address the student's educational related problems, if any, in terms of what needs to be done in the regular classroom or any other resources needed.

3. Short-Term (Annual) Goals

An annual goal represents the achievement anticipated for the student over a period of one school year. This is an educated guess or estimate of where the student will be at the end of one year, if a prescribed intervention program is followed.

Many goals will take more than one year to accomplish. The annual goals should be viewed in a sense, as the short range goals leading to broader expectations that will enable students to achieve their maximum potential upon leaving school.

The areas which may need to be addressed in making short-term goals include: Reading, math, visual-motor skills, writing and spelling, interest, motivation, social and/or personality changes.

In this section the tester should indicate the entry point where instruction should begin in a subject area, state the first few instructional objectives, and then the recommended sequence that should be followed (refer to the STEP Program).

4. Long-Term Goals

Long-term goals are a projection of the achievement and levels of functioning anticipated for a student over a period of two to four years; longer in some instances. These will be of a more global nature than short-term goals, but should be based upon extensions of the short-term goals.

These may include: academic achievement, social changes, functional education, health, vocational, etc.

5. Instructional Materials and Strategies

Any suggested materials or techniques such as small group materials, AV materials, oral/written suggestions, etc.

6. Supportive Services

Counseling; formal or informal, teacher counseling. Address any concerns or referrals for vision, hearing, health, etc.

7. Evaluation Criteria for Success

Mastery of academic skills, impulse control, improvement of self-concept, more group participation, acceptance of responsibility, independence, confidence, etc., decreased absenteeism, control over emotions.